

ALAGAPPA UNIVERSITY

(Reaccredited with 'A' Grade by NAAC)
Karaikudi 630 003



DIRECTORATE OF DISTANCE EDUCATION

MBA (Banking & Finance)



PAPER - 4.3
PROJECT FINANCE

ALAGAPPA UNIVERSITY

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KARAIKUDI - 630 003, TAMILNADU

DIRECTORATE OF DISTANCE EDUCATION

MBA (B & F)



Paper - 4.3

Project Finance

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Objectives:

- To explain the basic concept of projectfinance
- To understand about the various sources of project finance
- To understand the evaluating techniques in projectfinance

BLOCK I: BASICS OF PROJECT FINANCE

UNIT1 Project meaning – Stages in a project cycle: Project identification, formulation: Technical appraisal, commercial appraisal , financial appraisal and economic appraisal.

UNIT2 Project Implementation- meaning –stages in implementation - Project evaluation – types of evaluation -Role of consultants in projectmanagement:

UNIT3 Sources of finance for a project: Public issue of shares, debentures, public deposits, leasing, internal generation of funds, commercial papers, global depository receipts, borrowings frombanks.

UNIT4 FIs – Venture capital — stages of venture capital financing- Innovative instruments in the capitalmarket- convertible debentures –Global depository receipts – Commercial papers.

BLOCK II: PROJECT FINANCE APPROACHES

UNIT5 Project financing – Estimating the total capital requirements – Factors determining the fixed capital.

UNIT6 working capital – Judicious financing plan – Capitalgearing- Matching of requirements with available financial assistance fromvarious sources.

UNIT7 Process of lending for a project:Sanction – Disburshment and followup of advances. Managerial appraisal- Evaluation of managerial skills, past records, management and working of other group companies –organization setup .

UNIT8 Appraisal of technical aspects: evaluation of appropriative technology, availability or raw materials and utilities and safeguards against pollution, effluentdisposal/treatment.

BLOCK III: EVALUATION AND FINANCIAL ASPECTS

UNIT9 Commercial appraisal – Evaluation of commercial aspects: Estimation of demand supply gap, distribution channels and sellingarrangements

UNIT 10 Evaluation of financial aspects: Debt equity ratio, current ratio, debt service coverage ratio, return on investment, security margin, internal rate of return and breakeven analysis.

UNIT11 Economic appraisal – Economic analysis: Economies of scale, employment generation, contribution to government revenue, political stability, priority and evaluation of international competitiveness.

BLOCK IV: INDUSTRIAL SICKNESS AND MONITORING

UNIT12 Social cost benefitanalysis: Significance- social cost-social benefits – social rate of return

UNIT13 Project monitoring –Ojectives of monitoring – methods of monitoring –Recovery mechanism :Legal measures and non legal measures.

UNIT14 Industrial sickness: Warning signals and causes – Rehabilitation of a sick industrial unit – Role of the board for industrial and financialreconstruction (BIFR)

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PROJECT FINANCE

What is a Project? _ Stages in a project cycle: Project Identification, Formulation, Evaluation and Implementation _ Role of consultants in project management.

Sources of finance for a project: Public issue of Shares, Debentures, Public deposits, Leasing, Internal generation of funds, Commercial Papers, Global Depository Receipts, Borrowings from banks and FIs _ Venture Capital _ Innovative instruments in the capital market.

Project financing - Estimating the total capital requirements _ Factors determining the fixed capital and working capital _ judicious financing plan _ Capital gearing _ Matching of project requirements with available financial assistance from various sources.

Process of lending for a project _ Presanction appraisal _ Appraisal of managerial and technical aspects: Evaluation of managerial skills, Past records, Management and Working of other group companies evaluation of appropriateness of technology, Availability of raw materials and utilities and safeguards against pollution, effluent disposal/treatment.

Project appraisal _ Evaluation of Commercial aspects: Estimation of demand supply gap, Distribution Channels and Selling arrangements _ Evaluation of financial aspects: Dept Equity Ratio, Current Ratio, Dept Service Coverage Ratio, Return on Investment, Security Margin, Internal Rate of Return and Breakeven analysis.

Project appraisal _ Economic analysis: Economies of scale, Employment generation, Social Cost Benefit Analysis, Contribution to government revenue, Political Stability, Priority and evaluation of international competitiveness.

Project monitoring _ post sanction supervision and follow up _ How to improve recovery? _ Industrial sickness: Warning signals and causes _ Rehabilitation of a sick industrial unit _ Role of the Board For Industrial and Financil Reconstruction (BIFR).

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Course Materials Prepared by: Ms. K. ALAMELU,
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LESSON 1

STAGES IN A PROJECT CYCLE

What is a project?

The various scholars and practitioners dealt with the concept of 'Project' in their own way. Simply stated, a project pre supposes commitment of task(s) to be performed within well defined objectives, schedules and budget. Webster New 20th Century Dictionary refers it as a scheme, a design, a proposal of something intended or devised. The Dictionary of Management regards it as an investment project carried out according to a Plan in order to achieve a definite objective within a certain time and which will cease when the objective is achieved. Similarly, a project according to the Encyclopedia of Management, is "an organised unit dedicated to the attainment of a goal the successful completion of a development project on time, within budget, in conformance with pre-determined programme specification".

Another school of thought looks upon a project as a combination of interrelated activities to achieve a specific objective. For instance, a project according to Project Management Institute, USA, is a system involving the co-ordination of a number of separate department entities throughout the organisation, and which must be completed within prescribed schedules and time constraints. To Sinhas, a project is not a mere action or an activity or an attempt towards a particular aim; it is rather an integrated effort, including multifarious actions and activities, towards that aim.

One groub of scholars emphasise that a project - a unique and non-repetitive activity-aims at systematically co-ordinating inputs in the direction of intended outputs. To quote Harrison, " a project can be defined as a non-routine, non-repetitive one-offundertaking, normally with discrete time, financial and technical performance goals." A development project says Hirschman, connotes purposefullness, some minimum size, a specific location, the introduction of something qualitative, new, and the expectation that a sequence of further development moves will be set in motion.

There are still others whose primary emphasis is on appraising investment proposals form the economic Social profitability agnles. According and to Little and Mirrlees, "we mean by a project any scheme, or part of a scheme, for investing resources which can reasonably be analysed and evaluated as an independent unit". The Manual on Economic Development Projects too defines a project as the compilation of data which will enable an appraisal to be made of the economic advantages and the disadvantages attendant upon the allocation of country's resources to the production of specific goods and services. All the above definitions thus suggest that a project is an action - oriented enterprise.

Banks and financial institutions have to examine the viability of a project before providing financial assistance. They have to ensure that the project will generate sufficient return on the resources invested in it. With the shift form security-oriented lending to purpose-oriented lending, the study of viability of a project has become more vital for financing a project. Further, sanction of financial assistance after proper abbraisal alone is not sufficient for success of a project Disbursement of funds according to the requirements ofthe project and close supervision and follow-up are alsc equally essential to recover the financial assistance provided. In order to develop proper co-ordination with the entrepreneurs, many banks and financial institutions are not only providing financial assistance to viable projects but also assist the entrepreneurs during all phases of a project viz., identification, selection, appraisal, implementation and follow-up. All the phases are inter-related and the experience gained during appraisal and supervision of projects helps the banks and financial institutions to guide the entrepreneurs in identification and selection of new projects. The projects which are coming to banks and financial institutions for financing may be divided into following categories:-

(i) New projects	- For setting up new units.
(ii) Expansion projects	- For increasing the capacity of existing units
(iii) Diversification Projects	- For manufacturing new products by existing units
(iv) Backward Integration projects	- For manufacturing certain products which are being used as raw material by the existing unit

(v) Forward Integration Projects	- For manufacturing certain products which require the products of the existing unit as raw material
(vi) Modernisation Projects	- It can be for any one or more than one of the following objects:-

a) Changing obsolete machinery
b) Enlarging the product mix /product range to meet changing requirements of the market
c) Reducing the manufacturing cost or for improving the quality of the product
d) Changing the requirement of raw material (shifting from present raw material to some other raw material)

(vii) Rehabilitation	- For reviving sick units and making them viable to compete with normal/healthy units.

Stages in a project cycle

I. Project Identification

Projects usually do not emerge themselves. The impetus to set up a project can come from different sources such as Government agencies, credit and financial institutions,non-governmental organisation, and the people in general.

Government is the single most important agency for generating projects for obvious reasons. It is well conversant with development priorities and strategies; commands resources; has access to all types of information leading to project ideas; and has the wherewithals for conducting surveys and analysis. Governmental agencies include the top policy-making bodies e.g., Legislature, Planning Commission, Administrative Ministries, Research and Development departments and other existing Government departments / public corporations / companies / boards /commissions, training institutions and the like. To be more specific policy statements on the floor of the House by the Government culminates into project ideas. The plan documents provide a fertile source of generating ideas. The R & D Departments/ other institutions like C.S.I.R., D.G.T.C., N.R.D.C., N.C.E.A.R., I.C.M.R., C.F.T.R.I., etc. based on

their evaluation studies have developed a number of project bringing out new products/ processes/technologies, controlling product prices, and the like.

Coming to credit and financing institutions, we find that since independence, there exists an elaborate structure of such industrial financing institutions. Prominent among these area the all-India term lending institutions, e.g., Industrial Finance Corporate of India, Industrial Development Bank of India, Industrial Credit and Investment Corporation of India,National Small Industries Corporation and Export Import Bank of India. These institutions have been primarily set-up for promoting industries. Similarly, the L.I.C., U.T.I., nationalised banks, Nabard, Industrial Development Corporation/small Scale Industrial Development Corporation, etc, are engaged in extending medium and long-term financing to the industries. These organisations conduct numerous studies of and on to help identification of bankable investment opportunities thereby adding to the pool of project ideas.

The non-governmental organisations include political parties, pressure groups, chambers of commerce and industry, technical consultancy organisations, inter-institutional groups and a host of international agencies (UNDP, UNIDO, etc.) These too are always on the look out for opportunities which can eventually be developed into projects.

It is the last source viz., people who play an important role in generation of new projects. This source unfortunately, up to a few years back, was tapped sparingly. It is only in recent years that there has been an increasing realisation about the inevitable need of obtaining a cross-section of ideas to take up new projects. People's involvement is also a must because they have a first hand information about their areas needs, problems and opportunities. More so, the modern Government has an explicit obligation to fulfill the object needs and services of its people at large. Hence, projects can best be generated through participatory approach which in turn involves complex interactions among a variety of force right form the very beginning in the development of project, i.e., by communications with community leaders, interaction through community meetings, interaction with representative community and multi village organisations; and interaction with representative of functional organisations.
Once the venture ideas have been developed by following one or combination of sources explained above, these have to be screened and evaluated in a preliminary fashion on the basis of internal and external constraints prior to their being put to additional tests

of pre-feasibility. This stage is an important one in context of project identification, because it facilitatesin determining whether

(a) the investment opportunity is so promising that an investment decision can be taken on the basis of the information elaborated at the prefeasibility stage;
(b) the project concept justifies a detailed analysis by a feasibility study;
(c) any aspect of the project ar critical to its feasibility and necessitate in-depth investigation through studies such as market surveys; and
(d) the information is adequate to decide that the project is not either a viable proposition or attractive enough for potential investors.

With the identification process, there can be three postulates: Project is found to be feasible; not feasible; and available data not adequate to arrive at decision. While the first and second propositions are the two extremes, it is in the case of last situation that investment decision can be deferred till additional data required is available and analysed in proper perspective. This stage comes to an end by laying down specific project objectives as clearly and concisely and without any ambiguity that these convey one and the same meaning to all concerned.

II project Formulation

Project planning is a cycle process. It takes the "seeds" of a project from its inception, launches it into the full-blooming, and steers it throughout its life. In order to achieve the real time benefits of planning as envisaged in the policy resolutions and plan documents, efforts have to be intensified and accelerated in the direction of project formulation. Project formulation refers to a series of steps to be taken to convert an idea or aspiration into a feasible plan of action. As Myrdal rightly observes, "Project formulation is one of the basic techniques through which planning can change from an institutional base to an institutional and rational base."

Project formulation aims at a systematic analysis of project potential with the ultimate objectives of arriving at an investment decision. In the process, it makes an objective assessment from all possible angle starting from identification of investment options up to its appraisal stage. It includes technical analysis (whether specifications of technical parameters is realistic and optimal); social profitability analysis (where it

is worth-while from society's point of view); financial analysis (whether costs / returns are properly estimated and project is also financially viable); and commercial analysis (whether production specification, marketing plan and organisational structure are soundly conceived).

Project formulation exercise cannot be a one man's show., It is a joint effort of experts drawn from diverse disciplines e.g., engineering, finance, economics, management as well as a hast of other subject-matter specialists. Project formulation has an in built warning mechanism. It helps the entrepreneur to stop further investment as soon as it spots out some weak symptoms. This, in turn, facilitates in controlling the expenditure during the project development. Formulation of projects is a complex and an intelligent task. It involves a number of sequential stages. Failure to appraise even one step on scientific lines adversely tells upon its health.

Broadly, four types of appraisal may be conducted while formulating an investment proposal:

* Market appraisal
* Technical appraisal
* Financial appraisal
* Economic appraisal

Market Appraisal

Market appraisal is concerned primarily with two questions:

* what would be the aggregate demand of the proposed product/service in future?
* What would be the market share of the project under appraisal?

To answer the above questions the market analyst requires a wide variety of information and appropriate forecasting methods. The kinds of information required are:

* Consumption trends in the past and the present consumption level
* Past and present supply position

* Prediction possibilities and constraints
* Imports and exports
* Structure of competition
* cost structure
* Elasticity of demand
* Consumer behaviour, intentions, motivations, attitude, preferences, and requirements.
* Distribution channels and marketing policies in use
* Administrative, technical, and legal constraints.

Technical Appraisal

Appraisal of the technical and engineering aspects of a project needs to be done continually when a project is formulated. Technical appraisal seeks to determine whether the prerequisites for the successful commissioning of the project have been considered and reasonably good choices have been made with respect to location,size process, etc. The important questions raised in technical appraisal are:

* Whether the preliminary tests and studies have been done or provided for?
* Whether the availability of raw materials, power, and other inputs has been established?
* Whether the selected scale of operation is optimal?
* Whether the production process chosen is suitable?
* whether the equipment and machines chosen are appropriate?
* Whether the auxiliary equipments and supplementary engineering works have been provided for?
* Whether provision has been made for the treatment of effluents?
* Whether the proposed layout of the site, buildings, and plant is sound?
* Whether work schedules have been realistically drawn up?
* Whether the technology proposed to be employed is appropriate from the social point of view?

Financial Appraisal

Financial appraisal seeks to ascertain whether the proposed project will be financially viable in the sense of being able to meet the burden of servicing debt and

whether the proposed project will satisfy the return expectation of those who provide capital. The aspects looked into while conducting financial appraisal are:

* Investment outlay and cost of project
* Means of financing
* Cost of capital
* Projected profitability
* Break-even point
* Cash flows of the project
* Investment worthwhileness judged in terms of various criteria of merit
* Projected financial position and flows
* Level of risk

Economic Appraisal

Economic appraisal, also referred to as social cost benefit analysis, is concerned with judging a project from the large social point of view. In such an evaluation the focus is on the social costs and benefits of a project which may often be different from the monetary costs and benefits to the firm. The questions sought to be answered in social cost benefit analysis are:

* What are the direct economic benefits and costs of project measured in terms of shadow (efficiency) prices and not terms of market prices?
* What would be the impact of the project on the distribution of income in the society?
* What would be impact of the project of the level of savings and investment in the society?
* What would be the contribution of the project toward the fulfillment of certain merit wants like self-sufficiency, employment, social order?

III Implementation Phase

The implementation phases for an industrial project, which involves setting up of manufacturing facilities, consists of several stages:

(i) project and engineering designs,
(ii) negotiations and contracting,

(iii) construction,
(iv) training, and
(v) plant commissioning.

What is done in these stages in described below.

Stage	Concerned with
Project and engineering designs	Site probing and prospecting, preparation of blue-prints and plant designs, plant engineering, selection of specific machineries and equipment
Negotiations and contracting	Negotiating and drawing up legal contracts with respect to project financing, acquisition of technology, construction of buildings and civil work, provision of utilities, supply of machinery and equipment, marketing arrangements etc.
Construction	Site preparation, construction of buildings and civil works, erection and installation of machinery and equipment
Training	Training of engineers, technicians, and works. (This can proceed simultaneously with the construction work)
Plant commissioning	Start up of the plant (This is a brief but technicallyCrucialstage in theproject development cycle)

IV. Project Evaluation

A scientific approach to the assessment of the success of any programme/ Project is the hall-mark of any modern evaluation system primarily on account of two factors. Firstly, evaluation has come to be expected as a regular accompaniment to rational programmes,and secondly, there has been a strong move demanding a systematic,vigorous and objective evidence of success. In other-words, it has to be

ensured that costs and benefits or physical achievements and financial targets are equally matched. This is possible through a systematic study and judicious application of the technique of evaluation.

Evaluation has its origin in the latin work "Valuere" which means the value of a particular thing, idea or action. Webster's New 20th Century Dictionary defines evaluation as "to determine the worth of, to find the amount of value of, to appraise." Evaluation is also termed as to examine and judge concerning the worth,quality, significance, amount, degree or condition of any given thing.

In simple words, evaluation is knowing about what is not known and also what is worth knowing. Charles Martin views evaluation as concerned with the progress of the project in meeting its principal objective, systematic and comprehensive evidence on the degree to which the programme/project achieves its intended objectives plus the degree to which it produces other unanticipated consequences. In this respect,evaluation is comparable to other techniques of social sciences in its concern for objectivity, reliability and validity in the collection, analysis and interpretation of the data. There are other who look at evaluation as a process (ascertaining the values),ar analysis (determining the merits and weakness of a programme/project); and also as an achievement audit (quantitative as well as qualitative). Thus, evaluation in the project Management cycle can be described as an integrated objective assessment of progress and its overall impact, an analysis of the difficulties encountered, and ascertaining the quantum of remedial measures to be taken.

Before we describe the role of evaluation in development programmes and projects in greater details, let us explain in brief the meaning, significance, and distinction in respect of four intermitent and interrelated terms viz., reporting, appraisal, monitoring and evaluation. Generally these four terms are often confused with one another and are made use of synonymously. To be more precise, reporting is the initial stage culminating towards evaluation in any programme or a project.

Reporting is essentially an organised and systematic flow of information on the various administrative operations with the help of which actual performance is continuously measured against planned goals and targets. The main purpose of a report is to provide simple, relevant, concise, accurate, timely, regular and dependable

information on the execution and progress of schemes to facilitate the implementing authority in the control and direction of the programme. Appraisal is a tool of management whereby the executive is able to focus his attention on specific aspects and areas of operation to ensure that the actual performance conforms as closely as possible to the established goals. It makes it possible to distinguish to high and low performance which assists the executive to focus attention on the inefficient areas of operation. It is through monitoring that one can watch during the implementation stage the actual progress against the targets planned, identifying the factors of deviation, suggesting alternatives and selecting the best remedial measure. Monitoring is thus, always done concurrently with the implementation or erecution of any programme, project or an activity. Lastly, evaluation unlike appraisal and monitoring stage is a post mortem of performance. It is the most crucial stage in bringing about reforms and improvements in planning, implementation and monitoring processes for future. It involves a systematic appraisal by which the value or worth of any project or a programme is determined and conclusions drawn. For this purpose, it involves an objective assessment of the progress, is impact on the intended benefits, and the stresses and strains experienced etc.

Objectives:

The primary concern of project evaluation is ultimately concerned with bringing about all-round improvements. Ideally, evaluation aims at comparing the assessment of performance vis-a-vis the total objectives. The reasons for the variances,if any, have to be highlighted, identified,analysed, and understood not only by those who generate the variance data, but also by the executives responsible for doing the job. Russell D.Archibald enumerates the objectives of project evaluation as:

1. To provide visibility, as clearly as possible, of the interrelationships between cost, schedule, and technical performance across the entire project.
2. To identify problems before they occur to the extent possible, so that they can be avoided or their effects minimized.
3. To identify opportunities quickly for schedule acceleration, cost reduction, or technical advance, and to exploit them before the opportunity is lost.

The Programme Evaluation Organisation of the Planning Commission has prescribed four fundamental and pertinent questions in order to arrive at the aims of evaluation of any programme, project or an activity viz:

1. What to evaluate 2. When to evaluate; 3. How to evaluate; and
4. Who is to take up the work of evaluation.

Thus, if somebody intends to judge the progress of any programme/project and its impact on the development process, it is inevitably necessary that evaluation must cover answers to all the above four questions in minutes details. Suchman-a leading propagationist in the field of evaluation has described the aims objectives of evaluation in terms of (a) programme effort, (b) performance, (c) adequacy, (d) efficiency, and (c) performance.

In order to achieve the above objectives, evaluation has to depend on the fulfillment of the following pre requisites, otherwise, it would be a futile effort in the direction of arriving at any fruitful conclusions with regard to the performance and impact of any programme/project:

1. A detailed description of programme/project stating its specific and general objectives.
2. Spelling out the objectives of evaluation both in quantitative and qualitative terms.
3. Selecting the scientific measuring techniques.
4. Collecting all the information through primary and secondary sources.

Above all, successful evaluation largely depends on the leadership qualities. The chief of a programme/project must carefully and candidly scrutinies and analyse the assessments both of his team and control systems and only then, he would be in the best position to evaluate its pros and cons in the right perspective.

Types

Evaluation can be categorised under two broad headings:

(i) in terms of the programme/project effects on the recipients,and
(ii) the objectives/goals of a programme/project.

1. Early Evaluation (Formative)

Detecting problems and suggesting modifications during the period of programme/project prior to its actual implementation i.e., state of preparedness.

2. On-going Evaluation (Interim)

Detecting effects after it has stabilized over a given period with the twin objectives of:

(a) Mid-course corrections of programme/project on a large-scale; and

(b) Interim analysis of programme/project effects, but not necessarily resulting in any changes.

3. Summary Evaluation (Summative)

Late stage evaluation (post mortem) of overall effectiveness of interrelation and of social and economic feasibility of replication for the purposes of future programme/project planning.

Similarly, keeping in view the purpose the type of evaluation, the objectives/goals of a programme/project can be categorised as:

1. The Immediate Objective;
2. The Intermediate Objective; and
3. The Ultimate Objective.

Normally, the three types of evaluation studies confine themselves mainly to the measurement of the 'Immediate' and the 'Intermediate' objectives of a programme/project. The ultimate objective is generally not taken up for evaluation in the true sense of the term because it calls for qualitative information on the behavioral aspects through in-depth probing which is time-consuming, costly, and restricts generalisations. The quicker and timely 'feedback' requirement of an evaluation system (to the formulation and implementation process of plans, programmes and project) generally comes in the way to go in for such a study.

Typically, evaluation must take place at the conclusion of implementation stage of any activity Such a step ensures the following inherent advantages:

- It would aid in Project Management and control throughout the duration of the Project.
- It would help to ensure compliance with user community objectives before implementation.
- Process of systems design would be evaluated at all stages to aid in improving effectiveness of the Design Teams.
- Cost savings would be realised by modifying systems through evaluation before, rather than after implementation.
- Evaluation would help to ensure that proper design procedures and policies were being carried out

Methods

Over the years, a variety of methodologies have been evolved by the academicians, practitioners and professionals for evaluating any programme/project. Some of the commonly used practices are discussed below.

1. First Hand Information

One of the simplest and easiest methods of evaluation by the project Manager or the Chief Executive is on the basis of getting first hand information about the progress, performance, problem areas, etc., of a programme/project from a host of staff and line officers, field personnel, other specialists, etc., who directly come into contact with him for one purpose or the other.

Direct observation about the performance and pitfalls by the Project Manager further facilitates the chance of an effective evaluation. This method, however, cannot be applied as a means of evaluation especially when the programme/project is a complex one, is of huge size, and is not localised geographically.

2. Formal/Informal Periodic Reports

Evaluation is also carried out by medium of formal and informal reports. While the informal reports sometimes give an ample opportunity about the facts of the case

as such, and is considered as a valuable instrument for evaluation, it is not based on any authenticity. It also evades responsibility and accountability for supplying a fictitious, biased, or distorted maligned information. As such,written reports at periodical intervals are highly relied upon for the purposes of evaluation. The reports are solicited with a great deal of help through designed sets of schedules and questionnaires. The written reports are also subject to a number of inherent limitations, e.g., the reports neither reflect anything on the qualitative aspects nor indicate any trends about the future or current problem areas. Sometimes, the reports are so huge, complex, and are submitted at such frequent intervals that it becomes horrible to understand and thus,lose its real purposes.

3. Graphic presentations

Graphic presentations through display of charts, graphs, pictures, illustrations,etc., in the room of Chief Executive and Project Manager, is yet another instrument for a close evaluation. Well designed presentations which take lesser space, are more visible, understandable and facilitate comparisons, have to be frequently changed depicting the performance and deviations, if any, about the expected results. The only flaw with this system is that it is a costly and a time consuming process.

4. Standing Evaluation Review Committees

Some of the organisations have set-up standing committees, consisting of a host of experts and specialists who meet regularly at frequent intervals. During the course of the meeting, the problems which require urgent attention are identified, alternative opportunities are explored, and remedial measures suggested to the Project manager to ensure that there is no laxity in achieving the desired results.

5. Project Profiles

Preparation of the Project Profiles by the investigating teams on the basis of standardised guidelines and model developed for the purpose, is also another method of evaluation. In this case, intensive studies are made right from the inception of an individual programme/project to its completion. The Plan Evaluation organisation of the Planning Commission has made an sample use of this technique in the finalisation of the Report of Integrated child Development Services.

6. Control Centre

Another effort towards effective and close evaluation has been made by setting-up control centres. Such centres are set-up for a single large project(s), or in some cases the total organisational operations with the following objectives in view:

1. Provides a single location for concentrated display of relevant information about the project (or projects).
2. Serves as a physical representation of the project, reminding all concerned of its existence, status, state of health, and importance.

Role of consultants in project management

Consultants are playing a very curcial role in project management. They render a variety of services to the entrepreneurs such as

* Guidance in project identification
* Preparation of feasibility reports
* Undertaking market surveys
* Encouraging the adoption of indigeneour technology.
* Drawing up rehabilitation programme for sick units
* Help to get financial assistance from various sources.

Review Questions

1. What is a project?
2. What are the sources of project identification
3. What are the information needed for undertaking market apraisal?
4. Explain the different method of evaluation.
5. Elaborate the different stages in a project cycle.
6. List down the services of a project consultant.

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PAPER 6

PROJECT FINANCE

LESSON 2

SOURCES OF FINANCE FOR A PROJECT I

After assessing the capital cost of the project, the entrepreneurs and financial institutions have to decide the pattern of financing the capital cost during construction period. A project can be financed by any one or more than one of the following sources:-

(i) Issue of ordinary/preference shares
(ii) Issue of secured debenture
(iii) Issue of convertible debentures and bonds
(iv) Term loans from financial institutions and banks
(v) Foreign investments
(vi) Special schemes formulated by financial institutions
(vii) Deferred credits from equipment suppliers
(viii) Leasing finance
(ix) unsecured loans and deposits
(x) Capital subsidy or development loans/sales tax loans
(xi) Internal accruals for existing undertakings.
(xii) GDRs
(xiii) Commercial papers.

The various sources can be broadly classified into two categories, equity capital and borrowed capital. The proportion between these two categories of funds may vary considerably from company to company, depending upon the nature of the project, its size, location, background of promoters and expected profitability.

Equity capital does not involve any fixed charge like loan for repayment of principal and payment of interest. It serves as a cushion in the event of a unfavourable conditions and operational difficulties. However, equity capital is more costly then

term loan due to corporate taxation policy in our country. Interest paid on term loan is a deductible item of expenditure for the purpose of paying the tax. But dividend on equity or preference capital is to be declared from net profit. In other words, the company may have to earn 20% to declare dividend at the rate of 10% (presuming the taxation rates for that company at 50%). Although term loan may be cheaper than equity, the institutions will not commit to provide the entire finance by term loan because they will not have any cushion and asset coverage for the loan to be provide by them. The debt-equity ratio generally allowed is about 1.5:1 depending on the nature of the industry, size of the projects, its location promoters' background, etc. Higher debt-equity ratio is allowed for projects promoted by technocrats, large sized capital intensive projects and also projects located in backward areas. The details of debt-equity ratio are discussed later in the chapter on Ratio Analysis.

Issue of Ordinary/Preference Shares

Within the issue of shares, choice between ordinary shares and/preference shares is simple. As stated earlier, the ordinary share capital does not involve any fixed charge on the company. On the other hand, preference share holders are entitled to dividend at a predetermined rate. Although dividend on preference shares is payable out of profits, in case of cumulative preference shares, dividend has to be accumulated to be paid in future even if the company incurs loss in a particular year. As soon as the company earns profit, it has to pay arrears of dividend to cumulative preference share holder before declaring any dividend on equity shares. Further, preference shares are redeemable by a certain pre-determined date. It can be said that preference shares do not have the advantages of equity shares, but the dividend on preference shares has to be declared from the net profit after deduction of tax. Therefore, issue of preference shares is not very attractive source of financing a project. However, many a times enhancement of capital is necessary to provide cushion to term lending institutions and have debt-equity ratio acceptable to them; but at the same time existing equity holders of the company having good working results may not like to enlarge the equity base and allow the entry of new equity holders to share in the profitability of the company. In such cases, it is advisable either to issue equity shares to existing share holders as rights or issue preference shares to the public.

Issue of Secured Debentures

In order to encourage industrial units to meet their financial requirements from the public, all restrictions on interest rates on debentures and public sector bonds other than tax-free bonds have been removed. Companies issuing such instruments are free to decide the interest rates depending on the market forces. In order to guide the investing public, companies are required to obtain a credit rating before floating these instruments. The terms of the issue can also provide for buy-back arrangements. Inspite of the above steps, public may not be very enthusiastic to subscribe to secured debentures unless some additional incentives are offered to them. A few companies have, therefore, linked the issue of secured debentures unless some additional incentives are offered to them. A few companies have, therefore, linked the issue of secured debentures with issue of equity shares. In order to obtain equity shares in such companies, investors have to subscribe to their debentures also. As equity shares are issued at a much lower price than their present market price, it would be worthwhile to apply for such equity shares inspite of the compulsion to subscribe to debentures. Such link issues made by companies having good working results have turned out to be popular. The proportion between equity shares and debentures is determined keeping in view the desired debt-equity ratio and requirement of funds. A few well established companies have been able to collect large amounts by issue of debentures having specific incentives. It can thus be said that efforts are being made to popularise public issue of debentures.

Issue of Convertible Debentures and Bonds

Issue of convertible debentures (secured) and convertible bonds (unsecured) is another method of raising loan funds. These debentures/bonds combine the benefits of equity capital and loan capital. Interests payable on convertible debentures/bonds till their conversion into equity shares is deducted from the profit of the company for the purpose of calculating taxable profit. Issue of convertible debentures/bonds of well established companies having good working results, have been very popular. Investors may take interest in convertible debentures/bonds to be issued even by new companies because they ensure a fixed return during the initial period of the project when the company may not be able to pay dividend on the equity share capital. Besides, the holder has the option to convert them into equity shares at a later stage. Thus, the investor has an assured minimum return and the possibility of capital gain. Many

companies having good record of profitability stipulate automatic conversion into equity shares so that the holder need not take the trouble of exercising the conversion option. Some companies stipulate that only certain portion of the debentures would be convertible into equity shares and the balance amount would continue to remain as debentures redeemable within 7 to 10 years. A few such companies have made arrangements with banks or financial institutions or finance companies to buy back thenon-convertible part of debentures (khokha) at a discount so that those investors who do not want to block their funds into debentures may surrender non-convertible part of debentures. Although they have to lose some money as discount on buy back of non-convertible portion, they get the shares against convertible potion of debentures at a price which is lower than the market price. For the purpose of financing expansion/ diversification projects, a few well-established companies have issued bonds or debentures on which no interest is payable and they are converted into equity shares. This conversion normally takes places after the project is commissioned and the company may be in a better position to service the enlarged equity. The non-receipt of interest is compensated to the investors by low price of conversion as compared to the market price of the shares. A few companies have issued simple non-convertible debenture with an attached warrant which entitles the holder of the warrant to subscribe to one or more equity shares at a certain point of time in the future after allotment. Such attached warrant is detachable, listed and tradable. However, the trading of such warrants has been very limited. It can be concluded that various incentives are being given to popularise debentures linked with equity shares.

Term Loans

Terms loans are provided by banks, State Financial Corporations (SFCs), State Industrial Development Corporations (SIDCs), State Industries & Investment Corporations (SIICs), and all-India financial institutions, viz., Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Reconstruction Bank of India (IRBI), Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC) and Unit Trust of India (UTI).

As per the present practice, small and medium projects having capital cost of the project upto Rs. 10 crores may be financed singly or jointly by SFCs, SIDCs/ SIIC and banks. They can obtain refinance from SIDBI/IDBI for the term loan provided by

them for such projects. It may be mentioned that small Industries Development Bank of India (SIDBI) was set up on 2nd April, 1990, Which provides refinance for the term loans given to small scale industries. Term loans given to medium industries having capital cost up Rs.10 crores are refinanced by IDBI. The ceiling on refinanceable loans have been raised in November, 1994 from Rs.90 lakhs to Rs.150 lakhs for SFCs of 'A' Category and from Rs.150 lakhs to 250 lakhs for SIDCs/SIICs of 'A' category. Banks can avail of refinance for term loan upto Rs.100 lakhs. Term loans in excess of the above refinanceable limits are provided by these institutions from their own resources. With effect from April 1,1995, the IDBI extends annual limits of credit to those SFCs/SIDCs who satisfy certain criteria relating to debt-equity, capital adequacy, percentage of standard and sub-standard assets and recovery. SFCs/SIDCs can avail of refinance from the annual limits given to them without submitting individual proposals.

Banks are permitted to provide term finance/loans for technically feasible, financially viable and bankable projects. An individual banks or banks in consortia/ syndicate may sanction term finance/loans to the extent of Rs.500/- crores for each project. However, a maximum quantum of term finance/loans sanctioned by an individual commercial banks together with its other exposures in the form of fund-based and non-fund-based credit facilities to a single borrower should be restricted to the prudential exposure norm prescribed by Reserve Bank. At present, a bank's exposure to a single borrower should not exceed 25% of its capital fund (paid up capital and free reserves) in the case of individual borrower and 50 percent in the case of group of borrowers. In respect of non-fund credit limits, only 50 percent of such limits should be taken into account for the purpose of calculating exposure ceiling. For term finance/loans in excess of Rs.500 crores, banks will provide financial assistance in participation with All India Financial Institutions subject to share of an individual bank not exceeding its prudential exposure norm and that of the banking system not exceeding Rs.500 crores.

Banks also grant term finance for creation/expansion/ modernisation of infrastructure facilities to private sector as well as public sector undertakings. However, the concerned public sector undertaking should be registered under the companies Act or a Corporation established under the relevant Act. The public sector undertaking to whom the banks can give term finance for infrastructure facilities should run on

commercial lines and the repayment of the term finance should be made out of subsidy made available to it by the Government. The projects being funded out by budgetary resources should not be sanctioned term finance by the banks.

It can be thus concluded that banks provide term loans to small and medium projects with or without participation of State Level Institutions and may obtain refinance from SIDBI/IDBI. They may also provide term finance for large projects from their own resources upto Rs.500 crores with or without participation of All India Financial Institutions. In cases where term loan requirement is more than Rs.500 crores, banks provide finance jointly with All India Financial Institutions.

Special Schemes formulated by Financial Institutions

IDBI has introduced Equipment Finance Scheme and Asset Credit Scheme for providing financial assistance to industrial concerns having good record of performance and sound financial position for acquiring equipment/machinery for the purpose of their modernisation/expansion/diversification projects.

Under Equipment Finance Scheme, term loan may be given to profit making companies having good track record up to a maximum extent of 75 percent of the cost of equipment plus taxes/duties, inland transportation and installation charges. The balance 25 per cent has to be provided by the promoters from their own resources or from internal generation of the company. The loan given under this scheme is repayable within a period of 5 years from the date of first disbursement including moratorium period. It is normally secured by hypothecation of equipment/machinery to be purchased. This scheme has been found useful by those existing units which require term loan to purchase certain specific equipment/machinery. The time taken in appraisal and disbursement of loan under this scheme is lower than that of usual project financing schemes.

The Asset Credit Scheme of IDBI envisages sanction of a line of credit which is normally valid for one year towards purchase of assets including those fabricated in-house. The company has to first make an application to IDBI for sanction of a line of credit, indicating the nature of assets proposed to be acquired together with cost estimates. After sanction of the line of credit, the company may draw the amount from

IDBI and when it purchases the equipment/machinery or incurs capital expenditure on fabricating it in-house. The assistance in provided under this scheme upto 100 per cent of the cost of asset plus taxes/duties, transportation and installation charges. Financing of second hand equipment is, however, not permitted under this scheme. Disbursement at a time is allowed for a minimum amount of Rs.10 lakhs from the line of credit which is normally valid for one year. The principal amount of credit together with interest is repaid in 19 equated quarterly instalments. This scheme is useful for those existing units which may have to incur capital expenditure on equipment/ machinery from time to time.

It may be mentioned that several other financial institutions have also formulated special schemes to provide assistance to promoters of the projects to suit their specific requirements.

Deferred Credits

Many times, the machinery suppliers provide the facility of deferred credit. In such cases, banks may be approached to give guarantee for the payment of deferred instalments to the machinery suppliers. Banks should examine the viability of the project before giving guarantee for such deferred credits.

Conversion option by All-India Financial Institutions

While providing aggregate financial assistance above Rs.5 crores to existing and new units, it was the practice of the All-India financial institutions to incorporate a condition in their loan agreement to convert a portion of the loan into equity at their option. keeping in view the liberalisation policy followed by the Government it was decided with effect from 22nd August, 1991 not to stipulate conversion option in loan agreements except in the event of default of the institutional dues as also in the case of rehabilitation assistance or additional assistance for meeting the cost overrun. In respect of loan agreements executed before 22nd August, 1991 where conversion option was stipulated but not exercised, it was decided to waive the same provided the borrowers had agreed to pay prevailing higher rate of interest except in the cases of default/ rehabilitation assistance/overrun assistance.

Co-ordination among Banks and Financial Institutions

While term loans are provided by financial institutions and banks, working capital facilities are given by banks. Therefore, it is necessary to have proper co-ordination among banks and financial institutions. Reserve Bank has issued instruction to banks and similarly Industrial Development Bank of India has advised the State Financial corporations and State Industrial Development Corporations to encourage co-ordination among banks and financial institutions. They are expected to follow the procedure of joint or at least simultaneous appraisal so that differences, if any, could be sorted out in the initialstage itself. Assessment of the working capital faccilities should be completed by banks well in advance and sanction of the requisite working capital facilities should be conveyed to the units at least 3 to 4 months before the project is likely to go into operation. While estimating the capital cost of the project and requirement of long term funds, financial institutions should calculate margin for working capital as per norms and practice followed by banks. Financial institution holding first charge over the fixed assets of a unit should concede second charge thereon to banks providing working capital facilities, whenever demanded. Similarly banks should also concade second charge in respect of the floating assets charged to them for working capital facilities, whenever so demanded by financial institutions.

It was felt that small units may find it difficult to approach to separate institutions for term loans and working capital facilities. Therefore,single window scheme was introduced for SFCs and twin function SIDCs (Small SIDCs performing the dual functions of SFCs and SIDCs_) in 1988 which was extended for banks in February, 1992. Under this scheme, all tiny and small units having aggregate cost of project (excluding working capital margin) and total working capital requirement upto Rs.50 lakhs are eligible to get their requirement of term loan and working capital from one institution/bank only. The financing institution/bank can get refinance from SIDBI. As this scheme may help tiny and small units in solving their problems of working capital finance, it is necessary to popularies it.

Review Questions

1. How does an ordinary share differ form a preference share?
2. What is deferred credit?
3. What are the features of equipment finance scheme?

MBM DE PAPER 6 PROJECT FINANCE

LESSON 3

SOURCES OF FINANCE FOR A PROJECT - II

Leasing Finance

The leasing of houses, godowns, offices, telephones etc. have been quite common in the society. It has also become popular as a source of term finance for acquiring cars, trucks, computers, office equipments and manufacturing plants. Under leasing finance promoter of a project (Lessee) enters into a contract with the leasing company (Lessor) to acquire an asset for a fixed period during which the lessee pays periodical rent to the lessor for the use of the asset. The lessee selects the equipment required by him which is purchased by the lessor by paying the cost. The lessee takes the assets for his use and pays lease rent for it. Generally, lease rent is fixed in such a way that the leasing company may be able to recover the complete cost of the equipment in the initial fixed period, say 5 years. This initial period is called primary lease period which is followed by a perpetual lease on nominal term/token rent for the remaining period of the life of the asset. The primary lease of 5 years can alternatively be followed by a secondary lease of another 3 to 4 years and thereafter followed by a perpetual lease and the lease rentals are accordingly adjusted during the primary lease period. A fair degree of flexibility is possible and a package can be tailor-made to suit the needs of the lessee. Leasing companies need to take care to see that the annual rental payments charged are neither too little to erode their profitability nor too high as to chase away the entrepreneurs. Leasing finance institutions should maintain a proper balance in their advance portfolio among parties, industries and regions. They should also ensure that their liability structure is properly balanced between their own resources and their borrowings.

Leasing finance is provided in our country by exclusive leasing companies in the private actor, finance companies transacting leasing business, manufacturer-lessors, leasing companies set up by financial institutions and subsidiaries of commercial banks. The Banking (Regulation) Act was amended in 1983 to permit the banks for establishing subsidiaries to undertake leasing activities. As a result of growing importance of leasing,

the Reserve Bank issued a circular in February 1994 permitting banks to undertake leasing activities departmentally also. Banks are now allowed to provide leasing finance directly to promoters and they need not set up a subsidiary for undertaking leasing activities. It is expected that some banks may develop the necessary expertise for it in their certain selected branches. Banks are also providing finance to the leasing companies and the augmenting the resources of leasing companies to enable them to increase their leasing activities. Bank's lending to leasing concerns should not exceed three times the net owned funds of the borrowing concern provided it is predominantly engaged in equipment leasing/hire purchase business, ie., at least 75 per cent of the company's assets are in equipment leasing/hire purchase and 75 per cent of its gross income is derived from these two types of activities as per the last audited balance sheet of the company. In respect of other equipment leasing & hire purchase companies, the limit for bank credit has been restricted to two times their net owned funds. The above ceiling on banks' lending to leasing/hire purchase companies is within the overall ceiling of borrowings of upto ten times the net owned funds of such companies. In other words, leasing/hire purchase companies can borrow upto ten times their net owned funds and out of which borrowings from banks should not exceed three/two times their net owned funds. It is hoped that in addition to providing finance to leasing companies, banks will gradually develop necessary expertise at their certain selected branches for providing leasing finance directly to the promoters of a project. A few financial institutions are also providing leasing finance either departmentally or through their subsidiaries.

Many projects are at present financed by the leasing companies as the time taken by them in providing necessary equipments to the promoters of a project is lesser than the time taken by financial institutions in appraisal and disbursement of loans. Acquisition of assets on lease does not normally impair debt raising capacity of the borrowers as lessors normally confine their security to the leased assets. While in case of term loans charge is created in favour of the term lending institutions for all the present and future assets of the company, the leasing company generally confines its security to the leased assets only. Thus, acquisition of assets on leasing does not impair the debt raising capacity of the lessee. However, leasing finance is comparatively more costly for financing a project than the term loans taken from financial institutions. A borrower has to take a decision to avail of leasing finance or term loan depending upon his requirement and future cash flow generations. Generally very large capital

intensive projects can not be financed by leasing alone. However, certain equipments can be taken on lease without much difficulty. Leasing finance is being provided for computers, office equipments, air crafts, automobiles, shipping, communication equipments, earth moving equipments, medical equipments, furnishing, industrial plants, machineries, hotels etc. It can be concluded that leasign finance supplements the other sources of finance available for financing the projects.

Unsecured Loans and Deposits

Many existing companies prefer to raise public deposits instead of taking term loans from institutions. Non banking non-financial companies can accept public deposits upto 25 per cent of net owned funds (paid-up capital + free reserves - accumulated losses). In addition, companies can accept unsecured loans from share holders or unsecured loans from public guaranteed by directors or issue unsecured debentures upto 10 per cent of net owned funds. In other words, unsecured loans cannot be raised beyond 35 per cent of net owned funds by a manufacturing or trading company. Following conditions should be followed by the companies for accepting public deposits

(i) Companies should issue advertisements in the prescribed form, both in English and in one vernacular language, inviting public deposits. In certain cases, statements in lieu of advertisements are also permitted.

(ii) Acceptance and renewal of deposits must be done against an application in writing in the prescribed form.

(iii) Companies must issue the deposit receipt in the prescribed form.

(iv) Companies should maintain a deposit register containing the prescribed particulars at their registered offices.

(v) Companies should not accept public deposits for periods less than 6 months and more than 36 months.

(vi) No company can pay on fixed deposits interest exceeding 15 per cent per annum.

(vii) Payment of brokerage should not exceed 1 per cent, 1.5 per cent and 2 per cent for procurement of deposits maturing in 1,2 and 3 years respectively.

(viii) In case of premature repayment of fixed deposits, the company should deduct certain percentage of interest as per the rules in force.

(ix) A return in the prescribed form containing the stipulated particulars of deposits as on 31st March of every year should be submitted to the Registrar of Companies/Reserve Bank of India.

Some companies pay interest at monthly rests to make their deposits attractive. Generally, companies give option to the depositors either to get interest at fixed intervals or get it compounded and receive a lumpsum amount at the end of the deposit period. Although existing companies having good working results can attract deposit from public, it may be difficult for a new company to finance its project by public deposits. It may also be difficult for new companies to repay public deposits within 3 years due to gestation period of the project and low profitability in initial years.

Sometimes, promoters have to provide unsecured loans to the company to bridge the gap between the promoters' contribution required for financing the project and the amount of shares subscribed by them. Sometimes, promoters may have to provide unsecured loans to finance overrun in the cost of the project.

Capital Subsidy or Development Loans/Sales Tax Loans

Government and development agencies provide subsidy, development loans/ sales tax loans for setting up industries in certain notified backward districts. While reckoning the above subsidy as a source of finance, the term lending institutions and banks should ensure that such assistance will be provided by Central Government/ State Government/State Development Agencies well in time during implementation of the project. If they feel that the assistance will not be provided by these agencies during the project implementation period, they should grant a bridge loan to be set off later against the payment to be made by Central Government/State Government/State Development Agencies.

Financing through retained earnings

This is strictly not a method of raising finance but refers to accumulation of profits by a company to finance its developmental activities or repay loans. It is also known as "Internal Financing" or "Ploughing back of profit". According to the latest provisions of the Companies Act, a certain percentage, as prescribed by the Central

Government (not exceeding 10%), of the net profits after tax of a financial year have to be compulsory transfered to reserves by a company before declaring dividends for the year.

Merits : This method of raising finance for a company is very useful because on the one hand it does not cost anything to the company and on the other hand it strengthens the financial position of the company. The chief merits of this method of financing can be put as follows :

(i) It enhances business reputation and increases the capacity of the business to absorb unexpected and sudden business shocks too.

(ii) As compared to other sources of financing, this method of financing is least costly since it does not involve any flotation cost as is the case with raising of funds by issuing different types of securities. Of course, it may not be wholly correct to say that retained earnings have no cost to the company. As a matter of fact, the cost of retained earnings is the return which the shareholders could have earned on the amount of retained earnings if it had been distributed.

(iii) This method of financing has been broadly found to be useful for financing expansion and improvements.

(iv) This source of financing is also useful since it carries no fixed obligation regarding payment of dividend or interest.

Issue of Commercial Paper

Reserve Bank of India appointed a 'Working Group on the Money Market' with Shri N Vaghul as its Chairman on September 5, 1986 to examine various aspects relating to the money market. The Working Group in its report submitted in January 1987 has given several suggestions for improvement in the working of the money market. It has also recommended for the introduction of short-term commercial paper for well-rated corporate borrowers. Commercial paper consists of unsecured promissory notes sold directly or through banks/security houses by the corporate borrowers for their requirement of short-term funds to investors in the money market. The commercial

paper market on the one side provides an opportunity to highly rated corporate borrowers for getting cheaper funds than they could obtain from the banks and on the other side provides an opportunity to institutional investors for earning higher interest than they could obtain from the banking system.

When highly rated corporate borrowers issue commercial paper instead of drawing on their limits of bank credit, the bank may lose first class clients. The banks, however, earn fees as issuers and dealers in commercial paper. More importantly, since the commercial paper is freely transferable, the banks, financial institutions and other holders of short-term funds are able to easily invest their short-term surplus funds in a highly liquid instrument of attractive rates of return and there would be an effective securitisation of the asset portfolio of banks and institutions.

The issue of commercial paper also provides an incentive to corporate borrowers to improve their financial position so that they can obtain relatively cheaper funds.

Keeping in view the various advantages of commercial paper and recommendations of the working Group, Reserve Bank decided to introduce the commercial paper in our country and issued necessary guidelines in the form of "Non-Banking Companies (Acceptance of Deposits through Commercial Paper) Directions, 1989" which have come into force with effect from January 1, 1990. A few modifications have been made in these Directions from time to time with the objective of liberalising the issue of commercial paper. Various provisions regarding issue of commercial paper at present are as under :-

(i) The tangible net worth of the company as per the latest audited balance sheet should not be less than Rs.4crores. For the above purpose, the tangible net worth means paid-up capital plus free reserves minus accumulated balance of loss, balance of deferred revenue expenditure and other intangible assets.

(ii) Working capital (fund-based) limit of the company should not be less than Rs.4 crores.

(iii) The company should obtain the specified credit rating from an agency approved by the Reserve Bank. At present, the Credit Rating Information Services of India Ltd. (CRISIL), Investment Information and Credit Rating Agency of India Ltd. (ICRA) and Credit Analysis and Research Ltd. (CARE) have been approved for the

purpose. The company should obtain at least P2 rating from the CRISIL or A2 from the ICRA or PR2 from the CARE. At the time of issue of commercial paper, the company should ensure that the rating is current and not more than two months old.

(iv) The borrowal account of the company should be classified as Standard Asset.

(v) As per the latest audited balance-sheet, the company should maintain a minimum current ratio of 1.3:1. For this purpose, the classification of current assets and current liabilities should be done according to the Reserve Bank guidelines on the subject.

2. Minimum and maximum period

(i) Commercial paper may be issued for maturities between three months and less than one year from the date of issue.

(ii) There is no grace period for payment of commercial paper. If the maturity date happen to be a holiday, the company is liable to make payment on the immediate preceding working day.

(iii) Every issue of commercial paper (including roll-over or renewal of existing issue) is treated as a fresh issue.

3. Denomination and minimum size

The commercial paper may be issued in multiples of Rs.5 lakhs. However, the amount (face value) of the commercial papers to be invested by any single investor should not be less than Rs.25 lakhs. It may be added that secondary market transactions may be done for amounts of Rs.5 lakhs or multiples thereof.

4. Ceiling on amount of issue

In the case of borrowers with MPBF of Rs,20 crores and above, commercial paper can be issued upto 100 per cent of the cash credit component of working capital (fund-based) limits given to such borrowers. In the case of borrowers with MPBF of less than Rs.20 crores, the aggregate amount to be raised by issue of commercial paper should not exceed 75 per cent of the cash credit component of working capital (fund-based) limits.

5. Mode of issue and discount rate

Commercial paper is issued in the form of usance promissory note negotiable by endorsement and delivery. The rate of discount can be determined by the company issuing the commercial paper. Commercial paper is also subject to payment of stamp duty as applicable.

6. Issue expenses

All expenses such as dealers' fees, rating agency fee, charges for provision of stand-by facilities and any other relevant charges connected with the issue of commercial paper should be borne by the issuing company.

7. Investors in commercial paper and endorsement

Commercial paper may be issued to any person or corporate bodies registered or incorporated in India (including banks) as well as unincorporated bodies. Non-resident Indian (NRIs) can invest in commercial paper only on non-repatriation basis and such a commercial paper is not transferable. The conditions regarding non-repatriability and non-endorsability should be indicated on the commercial paper issued to NRIs.

8. Procedure for issue of commercial paper

(i) Every company which proposes to issue commercial paper should submit its proposal giving details inthe prescribed form to the bank financing it/leader of the consortium arrangement together with the certificate issued by an approved credit rating agency.

(ii) On receipt of the proposal, the financing bank/leader of the consortium should scrutinise the same and on being satisfied that the eligibility criteria and the terms and conditions stipulated for issue of commercial paper are complied with by the company, should take the proposal on record.

(iii) The company should thereafter make arrangements for privately placing the issue. It may be added that the total amount of commercial paper proposed to be issued should be raised within a period of two weeks from the date on which the proposal is taken on record by the financing bank/leader of the consortium. It may be issued on a single date or in parts pm dofferemt dates provided that in the latter case, each commercial paper should have the same maturity date. If the usance of any commercial paper in the latter case falls short of three months, it is deemed to be a commercial paper for not less than three months for the purpose of the requirement of the minimum period of three months.

(iv) The initial investor in commercial paper should pay the discounted value of the commercial paper by means of a corssed account payee cheque to the account of the issuing company with the financing bank/leader of the consortium. As the commercial paper is carved out of the working capital (fund-based) limit of such company, there is no increase in its overall short term borrowing facilities.

(v) Once the issue is placed in the market, the working capital (fund-based) limit of the company issuing the commercial paper should be correspondingly reduced by the financing bank/leader of the consortium.

(vi) Every company issuing commercial paper should advise the Reserve Bank through the financing bank/leader of the consortium about the amount of commercial paper actually issued within three days from the date of completion of the issue.

Venture Capital

In general usage, venture capital is considered a synonym of high risk capital, ie., long-term funds invested in new enterprises. It is often thought of as "the early stage financing of new and young companies seeking to grow rapidly"/ It usually implies an involvement by the venture capitalist in the management of the client enterprises. It has also come to be associated, especially in the U.S.A. with the financing of new, high technology based enterprises.

Meaning :

In broad terms, we may define venture capital as the investment of long-term risk equity finance where the primary reward for the venture capitalist is an eventual capital gain. Venture capital is long-term risk capital to finance high technology projects, involving high degree of risk, and at the same time, giving strong potential for good profits. Leo Barnes Stephen Feidman explained, "Venture capital is the organised financing of relatively new enterprises to achieve substantial capital gain. Such new companies are chosen because of their potential for considerable growth due to advanced technology, new products or services, or other valuable innovations. A high level of risk is implied inthe term and is implicit in this type of investment, since certain ingredients necessary for success of such projects are missing in the beginning but are added later.

In practice, venture capital helps budding entrepreneurs, having skills and business acumen to realise their dreams. Some one comes forward with a new idea or attractive product and approaches a venture capitalist for financial assistance in implementing his project. Being a new concept it does not meet the rigid requirements of financial institutions and so new means of financing are needed. In such cases, venture capitalists provide the needed resources financial as well as managerial to implement the project. As soon as the project reaches the stage of profitability, venture capitalists sell their equity holdings at the market price. Invariably returns amply justify the risk taken in implementing new concepts. The objects of the investment is to provide capital appreciation.

Characteristics :

The main characteristics of venture capital investment are :

1) Investment in equity capital appreciates in course of time and investors can sell their shares at high premium. The profit so earned is taxed as capital gain, the rate of tax being quite low as compared to short-term gain under the income tax Act.

2) Only new projects of high technology, having high risk as well as scope for wind fall profits, are taken up.

3) Venture capitalists not only provide finance but also assist in the management of the enterprise to ensure smooth implementation.

4) The investment in new ventures lacks marketability/liquidity until the project is implemented and profits are generated.

5) The venture capitalists take speedy decisions in appraising projects and releasing funds.

Venture Capital in India

In India, venture capital is of recent origin. It marks the rise of the new class of technocrat entrepreneurs coming out with new technologies,new processes and new products, requiring financial assistance, which cannot be provided by the financial institutions in accordance with the appraisal criteria. Venture capital is fast emerging as thrust area for finance companies. The reason is obvious flexibility in comparison to bought out deals. An agreement is entered into between the venture capital fund and the assisted company that the venture will go public at a convenient time to off-load shares without any compulsion. Presently, there are large number of venture capital companies with different aims and objectives.

Issue of Global Depository Receipts (GDRs) and Foreign Currency Convertible Bonds (FCCBs)

Indian companies with good track record are permitted to raise funds from the international market by way of issue of Global Depository Receipts (GDRs) and Foreign Currency Convertible Bonds (FCCBs). While GDR is a dollar-denominated instrument which represents a certain number of equity shares, FCCB is a foreign currency denominated quasi-debt instrument which can be converted into equity in accordance with a pre-determined formula or may be retained as a bond as per the investor's choice.

The issuing company issues the securities in the name of an Overseas Depository Bank (ODB), generally a U.S. based international bank. The ODB in turn appoints a custodian bank in India which keeps the shares in its custody. The overseas depository

issues dollar denominated GDRs to international investors. Each GDR represents certain number of equity shares which are kept with the custodian bank in India. The GDR holders are permitted to convert their holding into underlying shares and sell the said underlying shares on Indian stock exchanges through registered merchant banker/ broker at prevailing market price. An investor who wants to sell his GDRs into underlying shares can surrender his GDR to the overseas depository. The ODB then directs the domestic custodian to release the equivalent number of shares from its custody. The shares can be sold in rupees and the proceeds of sales are remitted to the custodian, who converts it into foreign exchange at the market rate, deducts capital gains tax and remits the balance to the investor. While an investor can cancel his GDRs with the depository and recover the proceeds by selling the underlying shares, the issuing company is not given the option to reconvert the shares so released into GDRs for offering to new investors. Once the GDR is surrendered, it cannot re-enter the depository arrangement. A conversion of GDR into underlying shares thus permanently reduces the number of outstanding GDRs.

The GDR holders do not have any voting rights, so there is no fear of loss of management control. As the Indian Companies Act does not allow issue of non-voting shares, the right of voting is suspended by an agreement with the depository stating that it would not exercise its voting rights on the GDRs held by it.

When a company decides to issue GDRs or FCCBs, it has to seek the formal approval of the Board of Directors and the consent of the shareholders. Thereafter, it has to select a lead manager who decides, in consultation with the issuing company, about the structural aspects, such as the number of GDRs to be issued, the issue price (range) as also whether it would be public offer or a private placement. In case a company proposes to issue FCCBs, a decision has to be taken regarding rate of interest, conversion price, conversion period, etc. Subsequently, an application for floating the GDRs/FCCBs is made to the Ministry of Finance (Department of Economic Affairs). The government may give initially in-principle approval which may be converted into final approval after detailed examination of the prospects.

With a view of bringing uniformity in submission of applications, issue of approval, terms and conditions of the issue, etc. Ministry of Finance, Government of India had issued notifications in November, 1993, giving guidelines for issue of GDRs/

FCCBs. Subsequently, certain modifications had been made in the policy to suit the changing requirements. At present, the following policy is followed for issue of GDRs/ FCCBs:-

(i) One company may be allowed only one issue in a financial year with a minimum gap of 12 months between two issue by the same company. Further, not more than two issues may be permitted for any group of companies in a financial year.

(ii) A company should have financial position and good working records for getting permission to issue GDRs/FCCBs.

(iii) The amount raised by GDR issues should be used for following objects within 1 year from the date of issue :-

(a) Financing Capital goods imports
(b) Financing domestic purchase/installation of plant
(c) Pre-payment or scheduled repayment of earlier external borrowings.
(d) Making investments abroad where these have been approved by competent authorities.
(e) Upto 15 per cent of the total proceeds of an issue can be used for other general corporate restructuring purposes.

(iv) The present policy is restrictive towards FCCBs because such bonds form part of the country's external debt till their conversion is made into equity. In other words, preference is given to the issue of GDRs as compared to the FCCBs.

(v) As per the guidelines issued by the Government of India on 24th May, 1995, Indian companies launching Euro-issues (GDRs, FCCBs) may be allowed to keep the issue proceeds, as an interim arrangement, in bank/public financial institutions and would be allowed to be converted into Indian rupees as and when expenditure for the approved end-users including upto a maximum of 15 per cent of funds earmarked for general corporate restructuring uses are incurred.

The GDRs have become quite popular among the well-established companies having sound financial position because they do not carry voting rights. Their is no

fear of change of management. Secondly, the issuer does not take any forex risk as dividends are paid out in rupees which are converted into foreign currency by the depository. Finally, it is easier to deal with a single share holder (the Depository Bank) for dividend payments, holding annual general meetings, information dissemination and other activities relating to serving the shareholders. Foreign investors, particularly institutional investors, also find it advantageous to deal in GDRs rather than the underlying shares of the Indian companies because it enables them to enjoy all the economic benefits of the underlying shares without observing procedural formalities of registration with SEBI to purchase shares in India.

Apart from the above explained sources many Indian companies have come out with a number of innovative capital market instruments such as triple option convertible debentures, secured premium notes, deep discount bonds etc. These instruments are designed by combining the features of debt and equity capital.

Review Questions

1. What are the advantages of internal financing?
2. What are the points to be considered by a company while accepting public deposits?
3. Explain the various provisions regarding issue of CP.
4. What is GDR?
5. Explain the different sources of finance for a project.

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LESSON 4

PROJECT FINANCING I

Capital Cost of Projects

Estimation of the capital cost of a project provides the basic information to decide its pattern of financing and viability. If cost of the project is not estimated correctly, the preparation of cash flow and profitability estimates will be a futile exercise because the amount of depreciation, interest and dividend will change with the change in the capital cost of the project. An entrepreneur has to tie up the resources according to the estimates of the cost of the project. If there is an overrun in the cost of a project, the entrepreneur may find it difficult to arrange for additional resources and it may delay the implementation of the project which will lead to further overrun in the capital cost. Financial institutions and banks are taking an undertaking from entrepreneurs to meet cost of overrun, if any, in the implementation of the project. But such an undertaking does not have much practical meaning. Many a times, an entrepreneur is not in a position to bring additional resources to finance the overrun and ultimately financial institutions and banks have to provide additional resources to safeguard the money already invested in the project. Over-estimation of the cost of the project is also equally as bad as under-estimation. If the cost of a project is over-estimated, the financial institutions may have to make unnecessarily higher commitments and promoters may divert resources for other purposes. It is needless to state that estimation of capital cost of the project is necessary not only in the interest of entrepreneurs but also in the interest of financial institutions. Therefore, following guidelines have been prepared to give an idea to the entrepreneurs about the estimation of the capital cost and to the financial institutions for appraisal of the estimates given by the entrepreneurs:-

Details of Capital Cost of the Project and Methods of Appraisal

Items to be included			Documents Particulars to be scrutinised for appraisal
A.	Land and Site Development	I. Cost of Land II. Legal charges for registration III. Cost of levelling IV. Cost of laying roads V. Cost of fencing VI. Cost of gates	I. Ascertain from plant lay-out and proposed constru-ction of buildings that land is sufficient for the project and possible future expansion
			II. Agreement for purchase of land
			III. Rates of legal charges
			IV. Total area of roads and cost per square metre
			V. Total area of fencing and the basis on which provi-sion has been made.
B.	Buildings	I. Main factory Buildings	I. Design of buildings
		II. Ancillary factory	II. Different types of const-ruction and area under each type of construction
		III. Administra-tive buildings	III. Ascertain from plant lay-out whether proposed cons-truction of buildings is

		sufficient and also no necessary construction is done.
	IV. Godowns	IV. Rate per square metre of each construction
	V. Canteen, Guest houses etc.	V. Agreement with building contractor, if any.
	VI. Quarters for essential staff	VI. A note on past record of Building Contractor and Architect
	VII. Soils,tanks, wells etc.	
	VIII. Garages	
	IX. Cost of sewers, drainages,etc.	
	X. Architects' fee	
C. Plants and machinery	(a) IMPORTED PLANTS	
	I. F.O.B. value of plant to be imported	I. Ensure that proposed import of plant is necessary
	II. Shipping freight and insurance	II. Ensure that necessary stores and spares are also imported.
	III. Import duty	III. Quotations of plant to be imported.

IV. Clearing, loading, unloading and transportation charges.	IV. Orders, if already placed, of plant to be imported.
	V. Import licence.
	VI. Report of an independent engineer, if second-hand plant is being imported.

(b) INDIGENOUS PLANTS

I. Main plant and other machineries	I. List of main items of machinery to be purchased-Ensure that all items are included and they have proper balance of capacity
II. Machinery stores and spares.	
III. Sales-tax	II. Quotations received from various machinery suppliers.
IV. Transportation Charges	III. Cross-check with some reputable potential suppliers from whom the promoters could have asked, but have not asked to bid or quote
V. Foundation and Installation charges	
	IV. Selection should be done from various quotations on the basis of not only price but also technical sophistication, reputation of suppliers, deli-

		very dates, credit terms etc.
		V. Orders for machinery, if placed.
		VI. Contract entered between the company and machinery suppliers.
D. Engineering and consultancy fees	I. Furniture II.Officemachinery and equipment III. Vehicles-cars, trucks etc. IV. Cost of electric installation V. Equipment and pipes for distribution of water air and stream. VI. Laboratory euipment VII. Workshop equipment VIII. Fire fighting equipment IX. Effluent collection, treatment and disposal arrangements.	I. Details of various items of furniture, office machinery, equipment,etc and cost thereof II. Ascertain whether it is necessary to invest in vehicles for the project. Estimate cost of maintaining vehicle(s) and compare with transportation charges to be paid,if outside vehicles are hired. III. Contract regarding, electric installation, piping etc. IV. Price list of laboratory equipment, workshop equipment, etc.
F. Preliminary and pre-operative expenses	I. Brokerage & Commission on capital issue	I. Find the total amount of capital issue and calculate charges thereon.

	II. Other capital issue expenses	II. Find the construction period and calculate interest for that period
	III. Commitment charges	III. Calculate the amount of mortgage expenses.
	IV. Interest on term loans during construction period	IV. Calculate the other expenses during construction period
	V. Mortgage expenses	
	VI. Miscellaneous expenses during construction period.	
	VII. Cash losses, if any.	
G. Provision for contingencies	I. Probable increase in cost due to new additions	I. Divide total cost estimates into two groups-considered firm and non-firm.
	II. Probable increase in cost due to rise in prices, sales-tax, excise duty, transportation charges, fluctuation in foreign exchange rates, etc.	II. Make provision for contingencies on non-firm items of cost at the rate of 5% to 15% depending on inflationary trend and period of project implementation. Longer the implementation period, higher the contingencies required.
H. Margin money for Working Capital	I. Indigenous raw materials	I. Calculate total requirement of working on the basis of expected production in first

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II. Imported raw materials

III. Consumable stores

IV. Stock of goods-in-process

V. Stock of finished goods

VI. Outstanding debtors

year. However, if profitability estimates of first year indicate cash loss, take working capital requirement on the basis of the production for second or third year when the project is likely to generate profit.

II. In case of units requiring aggregate fund based working capital limits of less than Rs. one crore, units should bring in 5 per cent of their projected annual turnover from long term sources as margin money for working capital and banks will provide working capital limits at the level of 20 per cent of their projected annual turnover. In other words, total wor--king capital will be 25 per cent of projected annual turnover. Out of which, 5 percent will come from long term sources as margin money for working capital and 20 per cent from banks as working capital limits.

III. In case of units requiring aggregate fund based working capital limits of Rs. one crore and above, margin for working capital should be calculated as per second method of lending which ensures maintenance of a minimum current ratio of 1:33:1. In such units,the level of raw materials, consumable stores, goods - in process, finished goods and debtors shold be decided keeping in view the production requirements, process time and practice prevailing in the industry. After ascertaining the level of current assets, margin money for working capital should be calculated at 25 per cent of total current assets. It should be included in capital cost of the project to be financed from long term sources.

Each project is different from the other projects and cost of one project should not be blindly followed for other similar projects. However, it is worthwhile to have a

cross-check with previous data on hand or other sources (other financial institutions and banks, government institutions, consultancy organisations, trade associations, etc.) If a major difference is observed regarding cost of an per cent particular item, a detailed study should be done to identify the reasons for difference and to ascertain whether the difference be desirable. Institutions and banks should maintain a record of costs (estimated and actual) of past projects financed by them. Such record will help them to avoid the mistakes, if any, done in the past in appraisal work. If installed capacity of different projects in the same industry is different, the total capital cost of each project should be divided by its installed capacity to have a common factor to compare the capital cost of different projects in the same industry. If capital cost of a project is lower than the other project in the same industry, it is considered as a good sign. However, it is always not necessary that a project involving lower capital cost is better than the other project involving higher cost. For example, capital cost in terms of per tonne installed capacity is lower for setting up a mini paper plant as compared to capital cost in terms of per tonne installed capacity for big size paper plants. But the manufacturing expenses of mini paper plants may be higher than the large size paper plants. Therefore, the viability of a project should be decided after ascertaining manufacturing cost, selling price, demand for the product and other relevant matters. The cost of the project provides a basis for making financial arrangements to finance the project and to prepare the cash flow and profitability estimates.

Fixed Capital

The capital requirements of a business enterprise can broadly be classified into two main categories. They are :

(i) Fixed capital requirements, and
(ii) Working capital requirements.

FIXED CAPITAL

Meaning of Fixed Capital

It means the capital which is meant for meeting the permanent or long-term needs of the business. In other words fixed capital is required for the acquisition of those assets that are to be used over a long period.

Fixed capital is required for acquisition of the following assets :

(i) Tangible assets such as land, buildings, plant and machinery, furniture and fittings, etc.
(ii) Intangible assets such as goodwill, patents, copyrights, promotion costs, etc.

It should be noted that the fixed assets cannot be withdrawn from the business without disturbing the normal working of the undertaking. It is, therefore, necessary that sufficient funds are raised for acquisition of fixed assets. These funds are required not only while establishing a new enterprise but also for expanding, diversifying and maintaining intact the existing enterprise.

Assessment of fixed capital requirements : The assessment of fixed capital requirements for a business can be made by preparing a list of the fixed assets needed by the business. Having compiled a list of the fixed assets required for the business, it will not be difficult to ascertain the total funds required for purchase of fixed assets. The price of land can be found out from the property agents, the information regarding the estimated cost of construction of building can be obtained from the building contractors, the suppliers of machines can be asked to give quotations for the plant and equipment to be installed. Similarly, the amounts to be paid for patents, trade marks, goodwill etc. can also be ascertained.

Factors determining fixed capital : The amount of fixed capital requirements of a business depends basically on the following factors :

(i) Nature of the business : The nature of the business to a great extent determines the amount of fixed capital required by the business. For example, public utility concerns like electricity supply companies, water supply undertakings or railway companies would require heavy investment in fixed assets; on the other hand, a trading concern would require relatively much less investment in fixed assets.

(ii) Size of the business : Size of the business has also its impact on the fixed capital requirements of the business. It can generally be said that larger the size of the business, the heavier would be the investment in fixed capital.

(iii) Types of products : A company manufacturing simple consumer articles like soap, oil etc., will require a smaller amount of fixed capital as compared to a company manufacturing complicated industrial goods such as heavy machinery, tractors, etc.

(iv) Diversity of production lines : More fixed capital will be required in case of companies which have diversity of production lines as compared to companies which do not have much a diversification. For example, a company producing ancillary products or by-products together with main products will require greater amount of fixed capital as compared to companies which manufacture only main products.

(v) Method of production : A company manufacturing each part of a finished product by itself requires a greater amount of fixed capital as compared to a company which gets the parts manufacture form outside and merely assembles them in its own factory premises.

(vi) Method of acquisition of fixed assets : A company which purchases fixed assets against immediate cash payment or ownership basis requires a greater amount for fixed capital as compared to a company which acquires fixed assets on hire-purchase system or lease system.

Management of fixed capital is concerned with the raising of required fixed capital at minimum cost and its effective utilisation. The following principles should be observed in order to have an efficient management of fixed capital :

(i) Generally only such fixed assets should be purchased which are likely to increase the earning capacity of the business.
(ii) Wherever feasible, fixed assets should be purchased on rental or hire-purchase system. This would result in releasing pressure on bulk funds.
(iii) Obsolete or outmoded fixed assets should not be bought even though they may be available at lower prices.
(iv) There should not be any idle capacity. This would increase the overhead burden. In other words, new fixed assets should be bought only when there is already full utilisation of the existing fixed assets.
(v) Fixed assets should be maintained properly. Periodical inspection, overhaul and scheduled repairs would considerably increase the working life of the assets.

(vi) Proper depreciation should be provided out of profits to enable timely replacement of the fixed assets.

(vii) Investment in fixed assets should have a proper relationship with sales and profits. Fixed assets turnover ratios for different years can be found out to determine whether investment in fixed assets has been judicious or not.

(viii) The requirements of fixed capital should be met out of long-term funds such as share capital, debentures, loans from financial institutions, etc.

Working Capital

Meaning of Working Capital :

The term working capital refers to the capital required for day-to-day operations of a business enterprise. It is represented by excess of current assets over current liabilities. It is necessary for any organisation to run successfully its affairs, to provide for adequate working capital. Moreover, the management should also pay due attention in exercising proper control over working capital. It has been correctly observed by Schall and Haley that "managing current assets require more attention than managing plant and equipment expenditure. Mismanagement of current assets can be costly. Too large an investment in current assets means tying up capital that can be used productively elsewhere. On the other hand, too little investment can also be expensive. For example, insufficient inventory may mean that sale are lost since the goods that a customer wants to buy are not available. The result is that Financial Manager spends a large percentage of his time in managing current assets because these assets vary quickly and a lack of attention paid to them may result in an appreciably lower profits for the firm."

All this indicates that proper estimation of the working capital requirements is a must for running the business efficiently and profitably. The forecasts regarding working capital are made keeping this factor in view. However, the requirements of working capital depend on a number of factors. These factors have been explained below :

Factors Determining Working Capital

(i) Production policies : The production policies pursued by the management have a significant effect on the requirements of working capital of the business. The production schedule has a great influence on the level of inventories. The decision of the management regarding automation, etc., will also have its effect on working capital requirements. In case of labour-intensive industries the working capital requirements will be more. While in case of a highly automatic plan, the requirements of long-term funds will be more.

(ii) Nature of the business : Working capital also depends upon the nature of the business. The public utility concerns like railways, electricity, etc., have very little need for working capital since most of their transaction are on cash basis and moreover, they do not require large inventories. On the other hand, ordinary manufacturing and trading concerns require sufficient working capital since they have to invest substantially in inventories and debtors.

(iii) Length of the manufacturing process : Longer the manufacturing process the higher will be the requirements of working capital and vice versa. This is because of the reason that highly capital intensive industries require a large amount of working capital to run their sophisticated and long production process. On the same principle, a trading concern requires a much lower working capital than a manufacturing concern.

(iv) Credit policy : A company, which allows liberal credits to its customers, may have higher sales but will need more working capital as compared to a company which has an efficient debt collection machinery and observing strict credit terms. This is because in the case of the former company, a substantial amount of its funds will get tied up in its sundry debtors. The working capital requirements can also be affected by the credit facilities enjoyed by the company. A company enjoying liberal credit facilities from its suppliers will need lower amount of working capital as compared to a company which does not enjoy such credit facilities.

(v) Rapidity of turnover : There is a high degree of correlation between the quantum of working capital and the speed with which the sales are effected. A company having a high rate of turnover will need lower amount of working capital as compared to a

company which has a low turnover. For example in case of jewellers, the turnover is very slow. Not only they have to maintain a high inventory of jewellery of different types but also the movement of inventory is slow. Thus, the working capital requirements of a jeweller will be higher than those of a grocer.

(vi) Seasonal fluctuations : A number of industries manufacture and sell goods only during certain seasons. For example, the sugar industry produces practically all the sugar between December and April and hence the working capital requirements of this industry will be higher during this period as compared to any other period. Similarly, the woollen textile industry makes its sales generally in winter, hence its working capital requirements during this period would be large.

(vii) Fluctuation of supply : Certain companies have to obtain and maintain large reserves of raw materials due to their irregular sales and intermittent supply. This is particularly true in case of companies requiring special kind of raw materials available only from one or two sources. In such a case large quantity of raw materials has to be kept in store to avoid any possibility of the production process coming to a dead halt. Thus, the working capital requirements in case of such industries would be large.

Thus, there are several factors affecting the working capital requirements. However, as a general rule, it can be concluded that in most cases the period which elapses between the purchase of materials and the receipt of sale proceeds of the finished goods will determine the working capital requirements of any business.

Review Questions

1. Explain the various components of the cost of the project.
2. What is a fixed asset? What are the different sources of financing fixed assets?
3. Explain the various factors determining the working capital of an enterprise.

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LESSON 5

PROJECT FINANCING II

ludicious Financing Plan

Funds requirements decision and the financing decision are two major areas of financial decision-making. Funds requirement decision is concerned with the estimation of the total funds or capital requirements for the business enterprise, while the financing decision is concerned with the sources from which the funds are to be raised. In order that the business enterprise get the funds required at reasonable cost, it is also necessary to raise the funds at the proper time. It is, therefore, necessary that the promoters or the persons responsible for the management of the business enterprise take care of all these aspects right at the time of formation of the company by having a proper financial planning.

Financial planning, includes:

(i) Estimating the amount of the capital to be raised.

(ii) Determining the form and proportionate amount of securities.

(iii) Laying down the policies as to the administration of the financial plan.

Meaning of Financial Plan

Financial planning results in the formulation of the financial plan. It is primarily a statement estimating the amount of capital and determining its composition.

It states :

(i) The quantum of finance, i.e., the amount needed for implementing the business plans.

(ii) The patterns of financing, i.e., the form and proportion of various corporate securities to be issued to raise the required amount.

(iii) The policies to be pursued for the floatation of various corporate securities, particularly regarding the time of their floatation.

Principles governing a Judicious Financial Plan/Points to be considered while matching sources and uses of funds:

The financial plan should be prepared keeping in view the following principles:

1. Simplicity: The financial plan should envisage a simple financial structure capable of being managed easily. The types of securities should be minimum, since securities of various types will give raise to unnecessary suspicion in the minds of the investing public and create avoidable complications.

2. Long-term view: The financial plan should be formulated and conceived by the promoters/management keeping in view the long-term needs of the corporation rather than finding out the easiest way of obtaining the original capital. This is because the original financial plan would continue to operate for a long period even after the formation of the company.

3. Freight: The financial plan should be prepared keeping in view the future requirements of capital for the business. Of course, it is a difficult task since it requires making of accurate forecast regarding the future scale of operations of the company. Technological improvements, demand forecast, resource availability and other secular changes should be kept in view while drafting the financial plan. A plan visualised without foresight may bring disaster for the company in case it fails to meet the requirements for both fixed and working capital.

4. Optimum use: The financial plan should provide for meeting the genuine needs of the company. The business should neither be starved of funds nor it should have unnecessary spare funds. Wasteful use of capital is as bad as inadequate capital. A proper balance should be maintained between the long-term and short-term funds since the surplus of one would not be able to offset a shortage of the other.

5. Contingencies: The financial plan should keep in view the requirements of funds for contingencies likely to arise. It does not, however, mean that capital should be kept

unnecessarily idle for unforeseen contingencies. Promoters' foresight will considerably reduce this risk.

6. Flexibility: The financial plan should have a degree of flexibility also. Flexibility is helpful in making changes or revising the plan according to pressure of circumstances with minimum possible delay.

7. Liquidity: Liquidity is the ability of the enterprise to make available the ready cash whenever required to make disbursement. Adequate liquidity in the financial plan gives it a degree of flexibility too. It could act as a shock absorber in the event of business operations deviating from the normal course. This will help in avoiding embarrassment to management and loss of goodwill of the company among the public.

8. Economy: The cost of raising the required capital should be the minimum. It should not impose disproportionate burden on the company. This is possible by having a proper debt-equity mix.

Capital gearing

Capital gearing refers to the 'the make up of a firm's capitalisation'. In other words, it represents the mix of different sources of long-term funds (such as equity shares, preference shares, long-term loans, retained earnings etc.) in the total capitalisation of the company. For example, a company has equity shares of Rs.1,00,000, debentures Rs.1,00,000, preference shares of Rs.1,00,000 and retained earnings of Rs.50,000. The term capitalisation is used for total long-term funds. In this case it is of Rs.3,50,000. The term capital structure is used for the mix of capitalisation. In this case it will be said that the capital structure of the company consists of Rs.1,00,000 in equity shares, Rs.1,00,000 in preference shares, Rs.1,00,000 in debentures and Rs.50,000 in retained earnings. Thus capital gearing refers to the proportion between debt and equity capital.

Factors Determining Capital Structure/Capital gearing

The capital structure of a company is to be determined initially at the time the company is floated. Great caution is required at this stage, since the initial capital

structure will have long-term implications. Of course, it is not possible to have an ideal capital structure but the management should set a target capital structure and the initial capital structure should be framed and subsequent changes in the capital stucture should be done keeping in view the target capital structure. Thus, the capital structure decision is a continuous one and has to be taken whenever a firm needs additional finances.

Following are the factors which should be kept in view while determining the capital structure of a company:

(1) Trading on equity: A company may raise funds either by issue of shares or by debentures. Debentures carry a fixed rate of interest and this interest has to be paid irrespective of profits. Of course, preference shares are also entitled to a fixed rate of dividend but payment of dividend depends upon the profitability of the company. In case the rate of return (ROI) on the total capital employed (shareholders' funds plus long-term borrowed funds) is more than the rate of interest on debentures or rate of dividend on preference shares, it is said that the company is trading on equity. For example, the total capital employed in a company is a sum of Rs.2 lakh. The capital employed consists of equity shares of Rs.10 each. The company makes a profit of Rs.30,000 every year. In such a case the company cannot pay a dividend of more than 15% on the equity share capital. However, if the funds are raised in the following manner and other things remain the same, the company may be in a position to pay a higher rate of return on equity shareholders' funds:

(a) Rs.1 lakh is raised by issue of debentures carrying interest at 10% p.a.
(b) Rs.50,000 is raised by issue of preference shares, carrying dividend at 12%;
(c) Rs.50,000 is raised by issue of equity shares.

In the above case out of the total profit of Rs.30,000, Rs.10,000 will be used for paying interest while Rs.6,000 will be used for paying preference dividends. A sum of Rs.14,000 will be left for paying dividends to the equity shareholders. Since the amount of equity capital is Rs.50,000 the company can give a dividend of 28%. Thus, the company can pay a higher rate of dividend than the general rate of earning on the total capital employed. This is the benefit of trading on equity.

Limitations: The trading on equity is subject to the following limitations:

(i) A company can have trading on equity only when the rate of return on total capital employed is more than the rate of interest/dividend on debentures/preference shares.

(ii) Trading on equity is beneficial only for companies which have stability in their earnings. This is because both interest and preference dividend impose a recurring burden on the company. In the absence of stability in profits the company will run into serious financial difficulties in period of trade depression.

(iii) Every rupee of extra borrowings increases the risk and hence the rate of interest expected by the subsequent lenders goes on increasing. Thus, borrowings become costlier which ultimately results in reducing the amount of profits available for equity shareholders.

(2) Retaining Control: The capital structure of a company is also affected by the extent to which the promoters/existing management of the company desire to maintain control over the affairs of the company. The preference shareholders and debenture holders have not much say in the management of the company. It is the equity shareholders who select the team of managerial personnel. It is necessary, therefore, for the promoters to own majority of the equity share capital in order to exercise effective control over the affairs of the company. The promoters or the existing management are not interested in losing their grip over the affairs of the company and at the same time, they need extra funds. They will, therefore, prefer preference shares or debentures over equity shares so long they help them in retaining control over the company.

(3) Nature of enterprise: The nature of enterprise also to a great extent affects the capital structure of the company. Business enterprises which have stability in their earnings or which enjoy monopoly regarding their products may go for debentures or preference shares since they will have adequate profits to meet the recurring cost of interest/fixed dividend. This is true in case of public utility concerns. On the other hand, companies which do not have this advantage should rely on equity share capital to a greater extent for raising their funds. This is, particularly, true in case of manufacturing enterprises.

(4) Legal requirements: The promoters of the company have also to keep in view the legal requirements while deciding about the capital structure of the company. This is particularly true in case of banking companies which are not allowed to issue any other type of security for raising funds except equity share capital on account of the Banking Regulation Act.

(5) Purpose of financing: The purpose of financing also to some extent affects the capital structure of the company. In case funds are required for some directly productive purposes, for example, purchase of new machinery, the company can afford to raise the funds by issue of debentures. This is because the company will have the capacity to pay interest on debentures out of the profits so earned. On the other hand, if the funds are required for non-productive purposes, providing more welfare facilities to the employees such as construction of school or hospital building for company's employees, the company should raise the funds by issue of equity shares.

(6) Period of finance: The period for which finance is required also affects the determination of capital structure of companies. In case, funds are required, say 3 to 10 years, it will be appropriate to raise them by issue of debentures rather than by issue of shares. This is because in case the funds are raised by issue of shares, their repayment after 8 to 10 years (when they are not required) will be subject to legal complications. Even if such funds are raised by issue of redeemable preference shares, their redemption is also subject to certain legal restrictions. However, if the funds are required more or less permanently, it will be appropriate to raise them by issue of equity shares.

(7) Market sentiments: The market sentiments also decide the capital structure of the company. There are periods when people want to have absolute safety. In such cases, it will be appropriate to raise funds by issue of debentures. At other periods, people may be interested in earning high speculative incomes; at such times, it will be appropriate to raise funds by issue of equity shares. Thus, if a company wants to raise sufficient funds, it must take into account market sentiments, otherwise, its issue may not be successful.

(8) Requirement of Investors: Different types of securities are to be issued for different classes of investors. Equity shares are best suited for bold or venturesome investors. Debentures are suited for investors who are very cautious. In order to collect

funds from different categories of investors, it will be appropriate for the companies to issue different categories of securities. This is particularly true when a company needs heavy funds.

(9) Size of the company: Companies which are of small size have to rely considerably upon the owners' funds for financing. Such companies find it difficult to obtain long-term debt. Large companies are generally considered to be less risky by the investors and, therefore, they can issue different types of securities and collect their funds from different sources. They are in a better bargaining position and can get funds from the sources of their choice.

(10) Government policy : Government policy is also an important factor in planning the company's capital structure. For example, a change in the financial institutions may mean a complete change in financial pattern of the besides this, the monetary and fiscal policies of the Government also affect the capital structure decision.

(11) Provision for the future : While planning capital structure the provision for future should also be kept in view. It will always be safe to keep the best security to be issued in the last instead of issuing all types of securities in one instalment. In the words of Gerestenberg, "Manager of corporate financing operations must always think of rainy days or the emergencies. The general rule is to keep your best security or some of your best securities till the last".

Thus, there are many factors which are to be considered while designing an appropriate capital structure of a company. As a matter of fact, some of them are conflicting in nature. The relative weightage assigned to each of these factors will vary widely from company to company depending upon the characteristics of the company, the general economic conditions and the circumstances under which the company is operating. Companies issue debentures and preference shares to enlarge the earnings on equity shares, while equity shares are issued to serve as a cushion to absorb the shocks of business cycles and to afford flexibility. Of course, greater the operating risk, the less debt the firm can use, hence in spite of the fact that the debt is cheaper the company should use it with caution. Moreover, it should be remembered that Financial theory has not developed to the point where data related to these considerations are fed at one end of a computer and an ideal financial structure pops out of the other.

Consequently, human judgment must be used to resolve the many conflicting forces in laying plans for the types of funds to be sought.

Review Questions

1. Explain the features of a judicious financial plan.
2. What is trading on equity?
3. What are the points to be considered by an entrepreneur while matching project requirements with available financial assistance from various sources?

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LESSON 6

PRESANCTION APPRAISAL - APPRAISAL OF MANAGERIAL ASPECTS

Project Selection and Preparation of Project Reports

If an entrepreneur approaches a bank to assist him in selecting a project, it is better to have preliminary discussions with him regarding various projects which can be promoted by him. The bank may guide him in selecting a project depending on his ability, aptitude and financial resources. A preliminary discussions with the promoter helps the bank in getting necessary information. A bank may not be interested in financing certain types of projects at a particular point of time owing to excessive involvement already committed in that field, difficulties of marketing faced by existing units, difficulties regarding availability of raw material, government guidelines, etc. A bank may not like to have a bad reputation of rejecting many proposals. It is, therefore, important that promoters have the benefit of preliminary discussions at senior level and are guided by the expertise available with the bank for selecting a suitable project. If a branch has a separate officer for processing loan applications, he should be associated with the manager during the preliminary discussions.

If the proposal is prima facie satisfactory, promoters may be advised to submit necessary information in the prescribed application form for detailed appraisal to be done by the bank. In case of large projects, detailed project reports are prepared by the entrepreneurs with the help of consultancy organisations or individual consultants. Project reports should give the details regarding manufacturing process, size of the plant, product-mix, selection and procurement of plant and machinery, plant layout, availability of various inputs required for production, capital cost of the project and sources of financing, prospects of marketing, proposed management set-up and future profitability estimates. Banks and financial institutions have to evaluate judiciously the information given in project reports.

Project Appraisal

It is necessary to examine the viability of a project before sanctioning financial assistance. A project is considered viable if it is likely to generate sufficient return to serve the resources invested in it. The surplus available from the project should be sufficient to pay interest on term loans and repay the principal amount within a reasonable period depending on the nature of a project. Highly capital intensive projects require higher repayment period as compared to small and medium projects. After provision for depreciation and payment of interest, taxes, etc., reasonable surplus should be available to serve the equity also after the gestation period. If a project is likely to generate sufficient income to serve the resources invested in it as above, it is considered a viable project. The viability of a project depends on technical feasibility, marketability of the products at a profitable price, availability of financial resources in time and proper management of the unit. It should also be within the framework of national priorities based on social cost-benefit analysis. In brief, a project should satisfy the tests of technical, commercial, financial and managerial feasibilities. Various aspects of project appraisal which are discussed in subsequent chapters can be summarised as under :-

1. Technical Appraisal
2. Commercial Appraisal - Appraisal of demand forecast
3. Financial Appraisal

I. Capital Cost of Projects and Sources of Finance
II. Financial Projections - Cash Flow and Profitability Estimates
III. Ratio Analysis
IV. Break Even Point
V. Discounted Cash Flow Techniques - Net Present Value and Internal Rate of Return

4. Economic Appraisal-Social Cost-benefit Analysis
5. Appraisal of Management

Appraisal of Management

A Project which is considered technically feasible, economically viable and financially sound may run into difficulties if it is not backed by sound and efficient

management. Man behind the project is very important. It is said that a second rate project in the hands of first rate management is better than a first rate project in the hands of second rate management. The experience of sick industrial units indicates that many of them have been rendered sick owing to inefficient or dishonest management. Therefore, proper evaluation of management is a highly essential part of appraisal of project. However, it is often difficult to form a judgement regarding future management at the time of project appraisal. Evaluation of management is an art and no formula or well-recognised steps exist for its easy solution.

The banks and financial institutions may receive an application for financial assistance either from new entrepreneurs for establishing a new project or from existing entrepreneurs for an expansion/diversification/modernisation project. While appraising existing entrepreneurs, their past record is always available. A judgement can be made on the basis of past balance sheets and profit & loss statements, credit record with bankers and financial institutions, dividend policy followed in the past, adherence to sound business policies and evidence of professionalism in management. While appraising expansion/diversification/modernisation projects, it should also be ensured whether present management is flexible enough to change itself according to the new circumstances. In case of new projects, the past record may not be available with institutions and banks. They may have to obtain information regarding background of the new entrepreneurs and try to judge their character on the basis of the performance of other units managed by them. Efforts should be made to get as much information as possible about the past record of the promoters. A thorough understanding of what a man has done in the past is very helpful in predicting his future potential. Many times when fresh engineers/graduates approach the lending institutions for financial assistance, it becomes rather difficult for them to judge suitability of such persons. However, each promoter has to come in contact with the appraising officer several times for discussions regarding the project. Appraising officer should evaluate the qualities of the promoter after interviewing him two-three times.

A check-list giving 10 qualities of an entrepreneur is given below to judge promoters of a project. However, the first four qualities are having higher importance than the other qualities mentioned in the check-list. Therefore, the first four qualities may be given double weightage than the other qualities-20,12 and 4 marks may be given for each of the first four qualities for securing excellent, good or poor ranking

respectively and similarly, 10,6 and 2 marks may be given for each of the last six qualities for securing excellent, good or poor ranking respectively. Accordingly, ten qualities mentioned in the check-list will carry 140 marks as the first four qualities are having double weightage. If an entrepreneur gets about 60% marks, he may be considered as a good entrepreneur. Such type of marking should be done after interviewing the entrepreneurs two-three times in connection with the information submitted by them regarding the project.

	Excellent (20)	Good (12)	Poor (4)
1. Character	Honest and keeps his words under all circumstances	Makes sincere efforts to honour his words	Does not bother much to honour his words.
2. Involvement in the project	Highly involved -only source of income.	Has other sources of income	Does as part time activities.
3. Financial Resources	Has enough financial resources to meet not only the requirement of promoters' contribution but also to finance small overrun in the cost of project.	Has sufficient financial resources to meet the requirement of promoters' contribution.	May have to borrow to meet promoters' contribution.
4. Competence	Has knowledge and experience relating to the project.	Has knowledge or experience relating to the project.	Has neither experience nor knowledge relating to the project.

5. Initiative	Highly alert to opportunities general	Performs work with just the guidance.	Routine worker awaits direction.
6. Intelli-gence	Very quick in understanding pertinent points of a problem.	Understands the problems after reasonable explanation.	Takes time to understand the implications of any action.
7. Drive & Energy	Always highly energetic.	Fairly energetic.	Avoids hard work.
8. Self abilities	Believes strongly in himself and his abilities.	Has faith in his abilities.	Believes in luck.
9. Frankness	Talks frankly about the weak points of the project.	Prepared to talk on weak points of the project.	Avoids talking on weak points of the project.
10. Patience	Has patience and does not expect quick results.	Appreciates the time taken by lending instit-utions in appraisal.	Wants quick results.

Although the above assessment is highly subjective, it gives an idea about the qualities of the promoters. If promoters are coming into contact with more than one appraising officer, all of them can do above ranking independently after meeting the promoters at least two-three times. An average can be obtained from the assessment independently done by different appraising officers.

Various Forms of Organisation

Units approaching banks and financial institutions for assistance can be divided into following three categories :-

1. Proprietory Concern
2. Partnership Firm
3. Corporate Sector.

In case of proprietory concern, qualities of the promoter and his chief executive should be studied with reference to the various requirements of the project. Every project has some critical area. For example, a consumer product may have difficulty in marketing or a sophisticated chemical project may have difficulty regarding production. We must ensure that the management has necessary key expertise required for the project.

In case of partnership firms, knowledge and experience of each partner should be studied in relation to the requirement of the project. Relationship among all the partners should also be studied. Many times a partnership firm comes into difficulties owing to quarrel among the partners.

In case of corporate sector, necessary appraisal should be done regarding composition of Board of Directors, constitution and powers of Management Committee, Chief executive and other executives.

(1) Board of Directors

The Board of Directors should have a broad base and should not represent only family members and associates. If financial assistance is very large, it should be ensured that independent persons with experience in diverse fields (finance, marketing, technical, legal, etc.) are inducted into the Board and these persons together with nominees of financial institutions should constitute the majority in the Board. If persons of national eminence are included in the Board, it may be ensured that they will be able to spare time to attend board meetings and contribute towards its functioning. Although a Board meeting should be held once in a quarter according to statutory requirements, it may be ensured that it is held as often as possible and at least once a month.

In the case of joint sector projects, many times private entrepreneurs are selected without considering their knowledge and experience with reference to the requirements of the project. Sometimes directors nominated on behalf of the State Government are changed so frequently that they do not show much interest in the project. Relationship between State Industrial Development Corporation and Private promoters should be studied and necessary precautions should be taken to avoid conflict between them.

In the case of public sector project, the financial institutions may insist that the Government will not change the Managing Director or Chief Executive without consulting them to have continuity in the project.

(ii) Management Committee

As it may not be possible for the Board to meet very frequently, it is advisable to constitute a Management Committee or Committee of the Board which can meet at least once in a fortnight. The Committee should have such directors who can spare time to attend the meetings and who know about the activities of the company. Nominee(s) of the financial institutions on the Board should also be included in the Management Committee. The committee should supervise various activities relating to project implementation like construction of building, purchase of machinery and recruitment of top executives. After the project is completed, the Committee should supervise production plans, marketing arrangements, financial arrangements, personal policy, etc. The Management Committee should be able to have effective control of various activities of the company and reduce the burden of the Board. However, it should work under the overall direction of the Board.

(iii) Chief Executives

The Chief Executive is really the nerve centre of the unit. He has to carry out the policy laid down by the Board. He should have the necessary qualities to manage the business and people. It is ideal if he possesses technical, financial and marketing knowledge of the project, but it may not always be possible to get such a chief Executive. He should at least have necessary leadership qualities in him to lead the team.

(iv) Other Executives

The Chief Executive should be assisted by other competent executives. The department heads should be selected according to job requirements and organisational set-up. The organisation should have proper co-ordination and delegation of authority. It should have following business functions :

(a) Purchase and storing
(b) Production
(c) Marketing
(d) Finance and management accounting
(e) Personnel and industrial relations
(f) Public relations
(g) Maintenance
(h) Quality control

(i) Research and development

The above functions can be further sub-divided or joined together depending on the size of the unit and requirement of executives to assist the Chief Executive. The appraisal of executives for a project involves following steps :

(i) Identify the managerial tasks to be performed.
(ii) Translate the identified managerial tasks into job or positions that will be filled by the people.
(iii) Describe the kind of people required for each position, ie., qualifications, training, experience, performance, skills and personal qualities required for each position.
(iv) Collect information about executives already recruited and decide how far they are suitable upto the above specifications.
(v) Consider the remuneration and other inducements to attract people according to the above specifications.
(vi) Evolve a scientific system of recruitment.
(vii) Estimate whether executives according to the above specification will be available. If any gap is expected, make necessary arrangements to fill it by providing training sufficiently in advance or recruiting part time specialists or assigning a part of the job to a consultant.

Management Problems

A few typical management problems can be summarised as under :

	Problems		Reasons
I.	Conflict among the promoters		Conflict may arise owing to serious differences regarding appointment of building contractor, purchase of plant and machinery, appointment of Managing Director and other senior executives.
II.	Conflict among executives	(a)	Lack of effective leadership at the top.
		(b)	Activities of various departments are not properly defined.
		(c)	Conflict may arise in matters relating to use of staff cars, company housing, foreign travel, etc.
III.	Autocratic style of management	(a)	Lack of delegation of powers to professional staff and frustration among them.
		(b)	Second line of corporate leadership is not allowed to develop.
IV.	Misuse of financial resources		Lack of proper control, siphoning of funds, excessive travel, entertainment and hotel bills, maintaining posh guest houses, etc.

V.	Lack of expertise	Recruitment of incompetent executives and lack of proper training.

The above problems cannot be solved by any single action. A combination of the following actions may be useful to reduce the management problems :

(i) Proper evaluation of the promoters may be done at the appraisal stage.

(ii) Company's Board of Directors may be broad-based and nominee(s) of financial institutions may be included at initial stage itself.

(iii) A management Committee or Committee of the Board may be constituted having nominee(s) of financial institutions, 2-3 members of the Board and senior executives of the company.

(iv) Meetings of the company's Board and Management Committee may be held at least once in a month and once in a fortnight, respectively.

(v) Selection of the chief executive and other senior executives may be done according to the requirements of the project.

(vi) If necessary, promoters may be backed by adequate consultancy arrangements.

(vii) A scientific system for recruitment of personnel may be evolved and, if necessary, suitable training for top level and middle level managers may be arranged at the appropriate time.

(viii) Division of work among various departments may be defined.

(ix) Necessary powers may be delegated to the heads of departments.

(x) Proper accounting system comprising budgetary control, costing, financial planning, internal audit and inspection may be adopted.

It can be concluded from the above the evaluation of the management at appraisal stage alone is not sufficient. Necessary conditions should be incorporated in the letter of intent for broad-basing the Board of Directors, formation of a Management Committee, nomination of the representative(s) of financial institutions on the Board/ Management Committee and appointment of suitable experts in consulation with participating financial institutions/banks. A close watch should be kept on the performance of the management not only to keep a control on it but also to provide necessary help and guidance at the appropriate time.

Review Questions

1. Emphasise the importance of managerial appraisal in project financing.
2. As a banker how would you undertake managerial appraisal?

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MBM DE PAPER 6 PROJECT FINANCE

LESSON 7

TECHNICAL APPRAISAL OF A PROJECT I

Technical appraisal of a project is essential to ensure that necessary physical facilities required for production will be available and the best possible alternative is selected to procure them. It includes the study of manufacturing process, technical arrangements, size of the plant, product-mix, selection and procurement of plant and machinery, plant layout, schedule of project implementation and location of the project with reference to availability of various inputs required for production. Although a banker may not have technical qualification, he can examine the following basic points relating to technical appraisal with his common sense, experience and discussion with the promoters and their technical personnel.

1. Technical Process/Technology

If a product can be manufactured by using alternative raw materials with alternative process routes, a comparative study should be done to choose the most suitable process. For example, oxalic acid can be manufactured by using different raw materials like molasses, starch, sodium formate, bark of Arjun/Sazza trees or saw dust. Soap can be manufactured by semi-boiled process or full boiled process. Bolts (fastners) can be manufactured by plain machinery (turning) or forging or cold heading. Soda can be produced by the electrolysis method or chemical method. The selection of process depends on quantity of production required, quality of the product required, its end use, availability of particular raw material and cost of process. For example, it is possible to adopt a simpler process for several chemical projects, if proposed products are of commercial grade. But if the proposed products are of high purity chemical or pharmaceutical grade, the process has to be sophisticated.

It is easier to follow a conventia! process. However, it should be ascertained whether any developments are taking place that might make the conventional process obsolete in the foreseeable future. Technological developments and upgradation has helped in better utilisation of resources and reduction in manufacturing cost in the

fields of electronic based consumer durables, computers, colour prints, etc. If a new process is developed which is more economical,it should be preferred for setting up new units provided it is suitable to our country. A process from foreign country should not be adopted blindly without giving due consideration to local conditions. It is necessary to study the back-up arrangements such as technical collaboration agreement and/or the results of the units using a particular technology.

If a product is to be manufactured by a particular process for the first time in the country, necessary study should be done about the success of that process in other countries and it should be ensured that arrangements for using the proposed technology are satisfactory. Similarly, necessary study should be done to ensure that a process developed in a research laboratory will be successful on a commercial scale. With the object of assisting entrepreneurs in identifying and selecting most appropriate technology, Government of India has decided to set up a Technology Data Bank during 8th Five Year Plan. The Data Bank shall keep necessary information on internationally available commercial technology so that the entrepreneurs are able to choose most appropriate technology for their proposed products. In order to promote adoption of new processes and technological innovations, IDBI has set up a Venture Capital Fund to provide assistance at concessional rate of interest during the development period. The rate of interest is enhanced once the process is developed and the product is accepted in the market. Similarly, IFCI has promoted the Risk Capital and Technology Finance Corporation to provide venture capital for promoting projects relating to adoption of technological innovations. A few other institutions have also framed special schemes to provide assistance for setting up industries using new technology where risk is high at the initial stage but return may be high when the product is accepted in the market. Financial institutions and banks also provide assistance under their normal schemes for adopting new technology if the chances of its success are reasonably good.

2. Arrangements for Technical know-how

It may be ensured that satisfactory arrangements have been made to obtain necessary technological know-how required for the proposed manufacturing process. The technical know-how can be procured from the following sources :

(i) Foreign Collaborators
(ii) Consultancy Organisations
(iii) Machinery Suppliers
(iv) Promoter's knowledge and experience
(v) Recruitment of suitable technical personnel

In the context of the New Industrial Policy Statement dated 24th July, 1991, government has introduced several changes to encourage foreign investment and foreign technical collaboration agreements. Under the revised procedure, Reserve Bank Considers applications from Indian companies for foreign technical collaboration in cases where the lump sum payment of technical know-how fee is upto Rs.1 crore and/ or the royalty payable does not exceed 5 per cent on domestic sales and 8 per cent on exports provided the total payment (both on account of technical fees and royalty) does not exceed 8 per cent of sales over a period of 10 years from the date of agreement or 7 years from the date of commencement of commercial production. Applications for approval of foreign technical collaborations which are covered under these parameters should, therefore, be made to the Exchange Control Department (Foreign Investment & Technology Transfer Section), Reserve Bank of India, Central Office, Mumbai - 400 023 in the prescribed form. Proposals which do not conform to the above parameters would require the approval of the Secretariat for Industrial Approvals (SIA), Government of India, New Delhi. In cases where the collaboration is approved by Reserve Bank/Government, a letter of approval is issued indicating the terms and conditions of the approval. The Indian company which has obtained approval for the foreign collaboration agreement from the Reserve Bank/Government should file a copy of the agreement with his banker through whom remittances falling due under the collaboration agreement would be made. The banker should maintain a proper record of the collaboration agreement and the remittances allowed there against which must be preserved for a period of five years from the date of expiry of the agreement. The Indian company should also submit a return in the prescribed form to the concerned office of Reserve Bank in the first fortnight of January each year showing payments made under the collaboration during the preceding calendar year duly countersigned by his banker.

If promoters have entered into an agreement with foreign collaborators, the terms and conditions of the agreement may be studied as under :

(i) The agreement should clearly define the nature of support to be provided by the collaborators in planning and designing of the project, selection and procurement of equipment, installation and operation of the plant, training of personnel at proposed and collaborator's present plants. The agreement should also define the recurring royalty/lump sum payment payable to collaborators, production parameters and performance guarantee.

(ii) If the technical collaboration is backed by financial participation, its implications with regard to the management of the unit and transfer of profit/payment of interest may also be studied.

(iii) It may be studied whether the collaborators have agreed to provide the benefit of research and development, if any, being done by them at their plants.

(iv) The period of collaboration agreement should match the provision of providing training to the local staff.

(v) The assistance and restrictions imposed by the collaborators regarding exports may be studied to ensure that the project will be able to meet its export commitments, if any, incorporated by the government.

(vi) The reputation of the collaborators may be ascertained from the size of their operation and status in the industry. The experience of a few other parties whom the collaborators have provided collaboration in the past may also be ascertained. The balance sheets of the collaborators for the last 3 years may be obtained to know the size and trend of their operations.

(vii) It is better if foreign collaborators are acquainted with the conditions prevailing in our country so that they may make changes, if necessary, in the manufacturing process to suit the local requirements. A new and highly sophisticated technology without due regard to local conditions may sometimes be as much deterimental to the project as an obsolete technology and process.

If it is proposed to obtain assitance from consultancy organisations (local and/ or foreign) for setting up the project, the experience of such organisation should be

ascertained to ensure that they will be able to execute such assignments. The extent to which such organisations will provide necessary assistance may be ascertained and it may be ensured that promoters have necessary expertise with them to carry out the remaining work. The fees payable to such consultancy organisations should also be reasonable.

If it is proposed to enter into a turnkey contract with the machinery suppliers, it may be ensured that all aspect of project execution and initial operations (including performance guarantee) are covered in the contract.

If no collaborator/consultancy organisation/machinery supplier on turnkey basis is involved, it may be ensured that either promoters are competent enough to supervise the installation of the plant or they appoint competent technical experts for it. They should also recruit at the appropriate time suitable technical staff to manufacture the goods as per the proposed manufacturing process.

3. Size of the plant

Size of the plant or its capacity can be expressed in one of the following terms :

1.	With respect to output (Quantity of finished product)	:	Pulp and Paper, Cement, Mini-steel plant, etc.
2.	With respect to input (Quantity of main raw material used)	:	Sugar mill, Cottonseed expeller unit, Solvent extraction plant, etc.
3.	With respect to number of machines	:	Power loom, Spinning mill, Textile mill, etc.

Size of the plant depends on the manufacturing process, availability of raw material, capital investment needed and the size of the market. Generally, a large size unit is more economical than a small size unit, but if the establishment of a large size unit needs heavy capital investment or the demand in the market is not sufficient for production at such level or sufficient raw material is not available for large size unit, it

may be better to set up a plant of small size. For example, it may be more economical to set up a large size plant to manufacture paper from forest raw material. However, establishment of large size paper plants has the problems of heavy capital investment, long gestation period and non-availability of forest raw material in sufficient quantity to meet the growing demand for paper in our country. Therefore, small size paper plants are being set up to manufacture paper from agriculture residues like wheat or rice straw. Use of straw as raw material has necessitated setting up of small plants in different parts of the country because sufficient straw may not be available at one place to meet requirements of a large size plant and its transportation from long distances may be costly.

The concept of economic size of the plant changes with the changes in technology, price structure, availability of raw material, demand for the product and other circumstances. The size of the plant and product-mix should be decided keeping in view the availability of raw material, power process to be adopted and size of the market. If necessary, provision should be made to increase the capacity in a phased manner.

4. Product-mix/Product-range

Product-mix or Product-range may be decided according to market requirements. Production of certain items may have to be done in different sizes and quality to suit different consumers. For example, production of shoes, readymade garments, wire nails and screw, tin cans for packing, etc. may have to be done in different sizes and quality. Sometimes, a slight difference in quality may help not only in increasing the sales but also in raising profit by having higher margin of profit on higher quality goods. For example, a toilet soap manufacturing unit may create quality diffrentiation by slight change in raw material and packing to cater to lower, middle and upper income groups. It may have higher profit margin on the soap meant forhigher income groups.

If possible, the plant may have flexibiity to change product-mix according to changes in the market conditions. If such a flexibility needs additional investment, its impact on the viability of the project may be studied. If the product has to face tough competition in the market or the demand for the product changes according to fashion

or extra amount required for the additional facilities is not heavy, it may be worthwhile to have such additional facilities or at least to keep provision to instal such additional facilities, whenever required in future. For example, a unit manufacturing tin cans for packing may have to keep dyes of different sizes of cans to produce according to market requirements.

5. Selection of Plant and Machinery

Selection of plant and machinery should be done according to manufacturing process and size of the unit. Different stages of manufacturing process should have proper balance of capacity. For example, a product has to pass through 4 stages and the capacity of proposed machinery for each stage is as under :

Production Cycle

Stages I II III IV

Raw Material = ------------------------------ Finished Goods

Capacity 90 80 60 80

The total capacity of the plant in above case will be considered as 60 units because the capacity in the third stage of process is only 60 units. If the capacity in the third stage is increased, the total capacity of the plant can be raised to 80 units without increasing the capacity of the other stages. Perfect balancing of all the stages may not possible in many case due to non-availability of certain machines of specific size. However as far as possible, a unit should have balance of capacity in different stages. Equipments for utilities (power, water, furl, etc.) should also have sufficient capacity to meet the requirements of main plant and machinery. While determining capacity of the plant and machinery, necessary provision may be made for process time, idle time and shut-down time required for it. It may also be examined that the list of machines (both imported and indigenous) is comprehensive and it includes all the items required for production. The list should include the equipments required for supply of utilities, quality control, effluent disposal, etc. If necessary stand-by arrangements may be made for critical equipment. Adequate provision may also be made for tools and spares. If possible, provision may be made for changing the product-mix to suit the changing needs of market as discussed in earlier paragraph on product-mix.

6. Procurement of Plant and Machinery

Valuation of plant and machinery can be done in an easy manner by dividing it into broad categories and itemising the same to the extent possible. The respective value of various items of machinery can then be arrived at/cross-checked. They can be procured by giving a contract on turnkey basis or by placing order for different items of machinery with different machinery suppliers. The procurement can be done through agents or thorough direct negotiations or by formal quotations. It is always not necessary to procure from suppliers whose quotations are the lowest. The machinery suppliers should be decided keeping in view the quality of the machine, the reputation of the suppliers, delivery schedule, payment terms, performance guarantee and other relevant matters. Many machinery suppliers undertake the job of installation and give performance guarantee for a specified period.

If performance guarantee is given by the machinery supplier, the terms and conditions of the performance guarantee should be studied. Generally, the performance guarantee provides for repairing the machines free of charge during guarantee period. But no performance guarantee compensates for the loss caused due to the closure of the plant. Therefore, performance guarantee is not a substitute for appraisal to be done about the quality of the machines and reputation of machinery suppliers.

If promoters propose to import second hand equipment, a certificate from a chartered engineer giving details of its history, present performance, valuation, economic life and suitability of second hand equipment should be obtained. If the cost of second hand equipment is quite high (say above Rs. 10 lakhs), it may be worthwhile to depute a mutually acceptable engineer abroad to study its present position. However, an engineer should be sent only after the sanction of loan, but before its disbursement because if an engineer is sent before sanction of loan and institutions/banks do not agree to provide loan afterwards, the expenditure incurred on deputing the engineer abroad may become a waste. The institutions/banks can incorporate a condition in their letter of intent conveying sanction of loan that they will disburse the loan only after receiving a satisfactory report from a mutually acceptable engineer on the equipment to be imported. The engineer to be sent abroad will be decided by mutual consultation between promoters and institutions/banks. The cost of sending an engineer abroad for this purpose may be included in preliminary and pre-operative expenses of the project.

In order to have uninterrupted production, it should be ensured that satisfactory arrangements for repairs have been made and necessary spare parts will be available in time.

7. Plant Layout

The efficiency of a manufacturing operation also depends on the layout of the plant and machinery. Proper plant layout can reduce manufacturing cost by saving time and money. Layout can be done basically in following three ways :

(a) Line Layout	-	Various machines required for a series of operations are arranged in the sequence in which they are used.
(b) Functional Layout	-	Various machines are grouped according to the operations they perform, eg., all the Lathes together. It is also called process layout.
(c) Group Layout	-	Various machines are grouped to produce a part or family of parts. It is also called product layout.

While deciding layout, the following factors should be considered :

(i) The process flow and flow of materials

(ii) Storage needed for raw materials, consumables, goods-in-process and finished goods

(iii) Interlinked storage yards and material handling facilities

(iv) Utility service systems

(v) Inter-departmental communications

(vi) Future expansion alternatives

(vii) Environmental aspects and disposal of industrial effluents

(viii) Safety precautions, particularly when manufacturing process requires handling of explosives

(ix) Effective supervision of work.

Plant layout may be done in such a way that minimum time is taken in handling equipment, raw material, consumables, goods-in-process and finished goods. Plant layout helps in specifying the construction of buildings required for the plant and preparing building plans. If the manufacturing process requires air-conditioning/air cooling, humidity control, dust control, etc., necessary care may be taken while preparing building plans. It may be ensured during project implementation that construction of buildings and installation machinery is done according to building plans and plant layout.

Review Questions

1. What do you mean by technical appraisal?

2. What are the different sources of procuring technical know how?

3. What are the points to be considered by a banker while scrutinising the technical collaboration agreement?

4. What are the different types of lay-outs?

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LESSON 8

TECHNICAL APPRAISAL OF A PROJECT II

Location of project

Study of the location includes selection of general location (city/town/village) and also a particular site within the general location. It may be decided keeping in view the relative importance of various requirements of production, which can be summarised as under :

(i) Land (area, cost and approach road)
(ii) Proximity to raw material (sugar, khandsary, cement etc.)
(iii) Proximity to market (food products, soft drinks, ancillaries, etc.)
(iv) Availability of labour (fire-works, handicrafts, power looms, sports goods, etc.)
(v) Utilities such as water, power, fuel, etc.
(vi) Effluent disposal
(vii) Transportation and communication facilities
(viii) Community infrastructure (houses, schools, hospitals, shopping centres, cultural activities, etc.)
(ix) Development of other industries not only to serve the varied needs of the project, but also to utilise by- products and/or disposal of waste.
(x) Facilities for setting up industries in backward areas (tax reliefs, subsidies, lower rate of interest, etc.)

It is always not possible to have all the above facilities at one place. Relative importance of each factor for a project should be studied and location should be decided keeping in view the availability of basic or major inputs required for the project. A comparative study may be done to choose a place where the cost of production is minimum.

(i) Land :

Land should be sufficient for the proposed project and the future expansion plans. The requirements of land can be assessed from the plant layout and the building to be constructed. If the proposed plant and machinery is very heavy, it is better to ascertain the load bearing capacity of the land. However, if the proposed plant and machinery is not very heavy and plants of similar size are operating in the neighbouring areas, the load bearing capacity test of the land may not be necessary. The proposed for industrial use. Expenses for site development, if necessary, should be added to the land cost.

(ii) Raw material :

If raw material is bulky and difficult to transport, it is better to locate the plant near the source of raw material. For example, steel and paper plants are located near the sources of their main raw materials. Similarly, if the quality of raw material is likely to deteriorate in transportation, it is better to locate the plant near the source of raw material. For example, sugar factories are located in sugarcane growing areas. Regular supply of raw material is very necessary for the successful operation of the plant. It can be obtained as under :

A.	Imported raw material	:	I.	Directly from foreign suppliers
			II.	Through canalizing agencies like State Trading Corporation, Minerals and Metals Trading Corporation, etc.
B.	Indigenous raw material	:	I.	Directly from manufacturers
			II.	Open market
			III.	Dealers/ Distributors/ Selling agents, etc.
			IV.	Quotas allotted to the unit.

The requirement of total raw material at full capacity should be ascertained and it should be ensured that necessary raw material will be available at reasonable price. If imported raw material is required for the project, the Government policy in this regard and the prospects for its production within the country should be studied. In certain cases, development of ancillary units may be necessary for the success of the project. If necessary, arrangements may be made for testing raw materials regarding their suitability for process requirements and yields.

The yields of raw material can be asdertained as follows :

$$\text{Yield} = \frac{\text{Quantity of finished product}}{\text{Quantity of raw material used}} * 100$$

Sometimes, raw material obtained from different areas may give different yields which may affect total consumption of raw material and viability of the project considerably. For example, sugar yield from sugarcane obtained from different areas may be different. Oxalic acid made from Saza bark may differ in yield in respect of the tree bark procured from different areas. In such cases, yield of the raw material should be ascertained keeping in view the source of supply or judge viability of the project. Arrangements may be made for storage of raw materials depending on their requirements and availability. More storage capacity may be required, if supply is seasonal.

(iii) Market :

Problems relating to demand projection and marketing are discussed in a separate chapter on Commercial Appraisal. It may be mentioned here that while deciding location of a project, comparative study regarding transportation cost of raw material and finished product should be done. If transportation of finished product is more difficult than its raw material, it may be better to set up such projects near the market. For example, units manufacturing food products (cakes, pastries, soft drinks, etc.) should be located near the market. An ancillary unit should be located near the main unit which will purchase its production.

(iv) Labour :

Labour in terms of unemployed people is available in plenty in our country. But sometimes skilled labour may not be available at a particular place. For example, factories engaged in carpet weaving and manufacture of sports goods, fire works, power looms, etc. have been located ar particular centres due to easy availability of labour there. If a plant is to be set up in an area where skilled labour is not available, necessary arrangements should be made to get labour from outside and training facilities for the local labour should be provided. If labour has to be obtained from outside, arrangements may have to be made to provide housing facilities.

(v) Utilities (power, water, fuel, etc.) :

A unit requiring high power consumption (like mini steel, aluminium, caustic soda, oxygen, etc.) should be located at a place where power supply is regular. If power supply is not regular and the nature of industry is such that sudden power failure may disturb the manufacturing activities considerably causing heavy losses as in the case of glass industry or chemical processing industry or cold storage unit. If power requirement is above a certain level, cost of transformers and other facilities may be included in the capital cost of the product. Consurrence of respective State Electricity Board may also be obtained while arriving at the cost of transmission/ stepping up-down of power as also for creating any captive generation capacity. if water requirement is high, the water table in the area of the proposed site and availability of enough water may be checked. Quality of water may have to be tested in certain cases like ice plant, soft drinks plant, etc. If the water is not suitable, arrangements (such as water softening plant) may be made to make it suitable for the manufacturing process. The co-operation of state and other local authorities, which control supply of power, water etc., may be ensured. If municipal connection for water is not available, necessary provision may be made in the cost of the project to dig tube-wells.

(vi) Effluent disposal :

The problem of effluent disposal differs from industry to industry depending on the nature and quantity of effluents. For example, disposal of effluents may have to be given due consideration for a chemical plant, cement plant, paper plant etc. However,

it may not be a serious problem for a light engineering unit or a ready-made garment manufacturing unit. It should be ensured that necessary treatment is provided to be effluents before they are discharged and permission is also taken from concerned authorities to discharge the effluents so that all emissions comply with the statutory provisions of effluent disposal.

(vii) Transport facilities :

If the proposed site is not connected with main roads, an approach road may have to be laid from the site to the main road. The quality of road may be decided keeping in view the quantum of goods to be transported. If the unit proposes to buy a vehicle,
its cost-benefit analysis may be done. If depreciation, interest and other expenses of maintaining a vehicle are less than the transportation charges to be paid to outside hired vehicles, it may be worthwhile to buy it. If transport of heavy material and finished products is involved, it should be considered whether it will be economical to have railway siding into the factor. If a unit has to export its heavy production to a large extent, it is better to locate it near a port.

(viii) Location of industries in backward areas and growth centres :

In order to reduce regional disparities in industrial development, Government and development agencies provide cash subsidies, development agencies provide cash subsidies, development loans and tax reliefs for setting up industries in notified backward areas. The financial institutions also provide assistance at concessional rates and relax their norms regarding debt-equity, promoter's contribution, repayment period, etc. The lower cost of lands and buildings, as well as lower wages are other advantages for setting up industries in backward areas. However, lack of infrastructural facilities, such as roads, railways, communication, drinking water supply, houses, ancillary services, etc. necessities higher investment. Non-availability of skilled workers affects the operating efficiency and requires additional expenditure on training. Availability of financial facilities alone is not sufficient to set up a plant in a backward area and therefore, a comparative study of advantages and disadvantages in setting up an industry in a backward area should be done. Such plants should be set up in the backward areas, which can get necessary inputs in those areas. If raw material, labour and other inputs

are obtained from other areas and finished goods are also sold in other areas, the development of backward area will not have the multilier effect.

In order to develop adequate infrastructure facilities, it has been decided to set up about 100 growth centres spread across the country. Each growth centre will acquire about 400 to 800 hectares of land for infrastructure development and for onward allocation primarily to small and medium sized units. The progress regarding development of growth centres should be ascertained while making the choice of location.

9. Schedule of Project Implementation

The Project Evaluation and Review Technique (PERT) or Critical Path Method (CPM) helps the promoters in proper planning, scheduling and controlling various activities essential for the execution of a project. All possible activities from project identification to commencement of production should be listed. If the project is small and it is not possible for the promoters to prepare PERT/CPM diagram, time taken in each activity can be shown at least in a bar-chart indicating the activities which should be done simultaneously. The preparation of such a chart will help the promoters to undertake various activities at proper time.

The appraising officer should whether all the activities have been included and the time schedule given by the promoters is reasonable. If any activity is likely to take more time than that shown by the promoters, he should take an assessment of its effect on other activities. Such an assessment gives an idea about the probable date of commencement of production. If also helps in disbursement of funds according to the requirements of the project and supervision of project and consequential problems. Therefore, proper evaluation of implementation schedule is necessary for estimation of capital cost (including provision for contingencies) and preparation of cash-flow and profitability estimates.

Arrangements should be made to procure necessary inputs like raw material, power, labour etc. at appropriate time so that the plant does not remain idle and the production may commence as soon as the installation of the plant is completed.

The above discussion gives an ides to judge the feasibility of a project to produce goods. It is not sufficient to ensure that necessary physical facilities will be available for production but it should also be ensured that the best possible alternative is selected to procure them to have minimum possible cost. Study of different alternatives and selecting the best possible among them makes the technical appraisal more meaningful and relevant. It may be noted that although a project may be technically feasible in terms of availability of physical facilities required for production, it does not justify its implementation unless the benefits, obtained form the project are more than its cost and it is found suitable after commercial, financial and economic appraisal which are discussed in subsequent chapters.

Review Questions

1. What are the requisites of an ideal project location?

2. Explain the various parameters of technical appraisal of a project.

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LESSON - 9

PROJECT APPRAISAL: EVALUATION OF COMMERCIAL ASPECTS

Commercial Appraisal - Appraisal of Demand Forecast

Many entrepreneurs come to the banks and financial institutions with a proposal to produce whatever they can without giving due consideration to the marketability of the proposed product. They do not provide any information about marketing and even if they provide the information, it may not be sufficient and reliable. In most of the cases, very vague and general statements like "market is good" or "competition is normal and not very much" are made. This type of approach may be alright at an early stage in the industrial development of a country, when new projects either serve to substitute imports or to cater to an existing demand which is not catered to at present. However, when this stage in industrial development is passed and the supply of most of the commodities is fast catching up or even beginning to exceed the demand for them as is happening in the country for many products, such approach would only result in lending institutions supporting wrong investment decisions which would in turn lead to problems both to the enterpreneurs and the term lending institutions and to misuse of scarce resource. The old style of selling "whatever we produce" should be converted into "whatever we can sell".

Fortunately, the lending institutions are becoming increasingly aware of the situation and have begun to take the required steps for the proper evaluation of the demand for the different products proposed to be manufactured by entrepreneurs approaching them.

In order to have proper appraisal of the demand forecast made by borrowers, the term lending institutions would require information regarding demand, supply, distribution, pricing and external forces. The information required by them can be classified under 5 major headings as mentioned below:

	Major headings		Information needed
1.	Demand	-	Product, uses, the consumers, actual consumption, likely consumption in future and export prospects.
2.	Supply	-	Production capacity, actual production, capacity utilisation, imports and likely future capacity.
3.	Distribution	-	Channels of distribution involved, the cost of distribution and the mode of trnasport.
4.	Princing	-	Domestic and international price trends, control on prices, duties and taxes.
5.	External forces	-	Government policies regarding industrialization, exports, imports, foreign collaboration, plan outlay, etc.

Whatever information is supplied by the entrepreneurs has to be checked by term lending institutions. There are various techniques (discussed below) which may be used for the purpose of forecasting aggregate demand and choice of technique mainly depends on the type of the product, the details in which required information can be available and the time available for study.

1. Import substitution

Certain chemicals, pharmaceuticals, engineering goods and accessories are still imported into the country. In certain cases, the entire requirements are imported. If the unit under review proposes to manufacture only a part of the goods imported, the procedure that needs to be adopted is fairly simple as under:

(i) Obtain past trends in imports
(ii) Obtain details of other units, if any, producing or likely to produce
(iii) Obtain imported prices (c.i.f) and duties and check the competitiveness of the price at which indigenous product is to be marketed.
(iv) Ascertain the channels and cost of distribution
(v) Ascertain the product specifications and quality.

2. Past Trend Method

This method is used when several years data for a product are available and when relationship and trends are clear and relatively stable. In such cases, a study of these past relationships and trends is made and it is assumed that the same will continue in future and thus will determine the future demand conditions. For instance, if the aggregate demand for a particular product has been growing at a certain rate over the past ten years, it is assumed that it will continue to grow at the same rate in future. The best steps in such demand estimates are as under:

(i) Determine whether the product is indigenously manufactured and/or imported
(ii) Determine whether the product is exported
(iii) Work out apparent consumption over a period of time (production plus imports minus exports)
(iv) Determine the growth rate in apparent consumption
(v) Applying the growth rate, estimate domestic demand for future.
(vi) Determine the growth rate in exports (if any) and applying the growth rate, estimate the future exports
(vii) Add the domestic and export demand estimated above.

3. End Use Method

This method is generally used while dealing with industrial intermediaries or inputs. The basic steps in an End Use Study are as follows:
(i) Determine the end-uses of the product under review
(ii) Determine consumption norms in each of the end-uses identified.
(iii) Determine present and future growth of the end-uses.
(iv) On the basis of the norms of consumption, determine present and future demand for the product.

4. Correlation and Regression

In certain cases, the definite relation between the supply and demand of one product and the demand for another may be found. In other words, a relatively independent variable may in some way determine the demand for a relatively dependent variable. In such cases, the growth and future prospects for the independent variable are examined and the prospects for the dependent variable are derived from that.

For example, the generation of electricity determines the demand not only for power generating equipments but also affects the demand for related items like cables and electric meters.

Often, more than one variable will determine the consumption pattern of an item. For instance, the demand for scooters will be determined by the disposable income with people, the price of oil, the price of scooters as compared to that of other two-wheelers and cars. The determining variable/s needs to be identified and the degree to which they affect the consumption of an item has to be established.

5. Export Market

In recent times, many units have been sanctioned capacity with a definite export commitment. Further, with the domestic market becoming saturated for an increasing number of products, exports are essential. Fortunately, sufficient literature is available on the world market for many products. Following steps are necessary to examine the prospects of exports:

(i) Asses the past trends in the volume of the world trade for the product under review

(ii) Assess the direction of this trade-which are the major importing and exporting countries

(iii) Examine the trends in international prices and also examine whether the unit under review could export at the international prices (with or without the export incentive available for the product)

(iv) Examine the duties and tariffs in different countries and tariffs concessions available for the product

(v) Assess the channels of distribution that need to be employed and the discounts and commissions that are given in the marketing of the product under review in the international market.

(vi) Examine other factors that have a bearing on the marketing of the product under review.

Check-list for verification of various aspects of marketing

Ascertaining the demand alone is not sufficient to study the commercial feasibility of a project. Many times although uncatered demand is available in market, a unit may not be able to sell its product. Knowledge of proper pricing policy, distribution policy, advertising policy and many other aspects of marketing is also essential to sell products. For this purpose, goods can be broadly divided as industrial goods and consumer goods. The emphasis may be more on salesmen for industrial goods and on proper distribution system and advertising for consumer goods. An illustrative check-list is given below to study the market structure of consumer goods, market structure of industrial goods, depth of competition, pricing policy, life cycle of the product, brand name for the product, packing and transportation, distribution channels, role of salesman, advertising and after-sales service:

1. Market Structure in respect of Consumer goods

(i) What types of consumers are using the product?
What are the characteristics of buyers in terms of income, occupation and education?

(ii) What is the likely size and frequency of purchase by consumers?

(iii) How do buyers buy? Brand specification, impulse or planned purchase, personal inspection, cash or credit.

(iv) Where do the buyers reside? Rural, town, cities or metropolitan areas.

(v) What product features appeal to most of the buyers? Any unique characteristics or effectiveness?

(vi) Are there any consumer prejudices, and if so, what?

(vii) Are the sales of the product likely to be seasonal or will the product sell evenly throughout the year?

(viii) What models, sizes and range of the products are usually preferred?

2. Market Structure in respect of Industrial Goods

(i) Which are the main user industries for the firm's products?

(ii) Which are the subsidiary user industries?

(iii) What changes are occuring in the user industries to induce a change in demand?

(iv) What changes are occuring in the non-user industries to induce a new demand?

(v) What is the user industry's structure, organisation and geographical division for the sale of the firm's product?

(vi) What is the size of the total market for the firm's product? What are the changes in the size of the market during last few years? Is it growing, steady or shrinking? Is there any significant trend suggesting a shift in demand?

(vii) What proportion of existing demand is met from imported sources?

(viii) Whether the firm is able to enter into a contract to supply its product to any user industry?

(ix) What are the export possibilities? Which are the main export markets for the product?

3. Depth of Competition

(i) Who are the main suppliers to the market?

(ii) What are the strengths and weaknesses of existing manufacturers?

(iii) What is the likelihood of other manufacturers entering the field with similar products?

(iv) What is the extent of brand recognition/preferences or insistence on competitive brands? What is the number of brands-national, regional and local? What are the characteristics of the leading brands?

(v) What steps will be necessary for the proposed unit to cope with existing manufacturers?

4. Pricing Policy

(i) Taking note of all items of cost, at what price (ex-factory) can the product be marketed?

(ii) What are the taxes and duties levied on the product for the domestic market?

(iii) What are the margins/discounts that have to be given to the trade?

(iv) Adding distribution costs and taxes/duties, at what price can the product be offered in the domestic market?

(v) What are prices of imported products and similar domestic products or substitutes?

(vi) What type of pricing would be appropriate for this product keeping in view the depth of competition and existing price?

(vii) In the light of existing trade customes, what would be the policy in areas such as credit facilities and acceptance of returned goods?

(viii) If the product is to be exported, the following points may be studied to decide export price:

(a) Cost of special labelling, packing, marking, strapping, etc. required for exports

(b) Transport, unloading, demurrage, terminal and forwarding agents charges that have to be incurred

(c) Frieght and insurance charges

(d) Export duties, if any

(e) Cash incentives for exports, if any

(f) What are the prices quoted by other exporters from the country?

(g) What are prices for the product and its substitutes at ports of major importing countries?

(h) What are the restrictions placed/assistance provided (quotas, tariffs, duty concessions etc.) by importing countries?

/(i) What are the competitive practices adopted by the other exporters in the international market (price reduction, higher margin, discounts, products differentiation, etc.) and can the proposed unit cope with these practices?

5. Life - Cycle of the Product

Many products, like human life, develop their potentialities in the beginning and start declining after reaching saturation point. Four stages can be identified in the life of the product viz., Introduction, Growth, Marturity and Decline. During the introduction stage, sales grow slowly. If the product is accepted, sales pick up rapidly till the naturity stage is reached when sales stagnate for a long time. The final stage of decline is marked by a rapid fall in sales. A manufacturer who intends to manufacture a product for the first time (for him) would try to know at what stage in its life cycle, the product he proposes to produce is in the market. If sales of the product are declining or present manufacturers are finding it difficult to sell their production, entry of new manufacturers should be carefully considered and financed only in those limited cases where special favourable points are available for them to sell their product. Products with short life cycle should have high profit margin and low break even points. Entrepreneurs should try to make necessary changes in quality, packing, advertising strategy, distribution system, etc. to increase the life span of their products.

6. Brand Name of Product

(i) Is it necessary to have a brand name for the product?

(ii) Whether the brand name proposed to be adopted is adequate with reference to memory value, suggestiveness, pleasantness, legal protection and goodwill value?

(iii) What are the legal problems relating to obtaining patent rights and protection of trade marks?

7. Packaging and Transportaion

(i) What type of packing will be necessary for the product and how does it compare with that of competitors in terms of attributes of protection, convenience attractiveness, easy identification, economy and adaptability to retail outlets?

(ii) How do the firm's packaging and physical transport methods compare with those of competitors in terms of cost, speed, liability to damage and liability to pilferage?

8. Distribution Channels

(i) What are the normal channels through which the consumers are accustomed to get this type of product?

(ii) What is the usual arrangement made by competitors to sell this kind of product to retailers?

(iii) If the product is to be distributed directly through retailers, what kind of retail stores are best suited and likely to sell it?

(iv) Is it better to sell through wholesellers or directly to retailers or directly to consumers or users?

(v) Is it necessary to have exclusive dealership arrangements for various areas? Some of the channels of distribution are illustrated in chart given below as

Manufacturers

Industrial goods	Consumer durables	Cigarettes Tooth paste, etc	Textiles
Wholesellers	Wholesellers		
Retailers	Retailers	Retailers	
Users/consumers	Consumers	Consumers	Consumers

The above example only illustrates the various agencies of distribution. Every unit must choose its policy of distribution and marketing organisation suitable to its requirements.

9. Salesman-Personal selling

(i) How many salesmen will be required? What should be the qualification and/or experience of salesmen to be recruited? What will be the cost of salesmen?

(ii) Procedures for selection, training and supervision of salesmen

(iii) Cost per rupee of sales-break-even point for salesmen

(iv) What aids do salesmen need?

(a) Advertising Support
(b) Samples
(c) Catalogues
(d) Drawings
(e) Marketing data
(f) Technical expertise
(g) Audio visual aids
(h) Demonstrations
(i) Offers of instalments/hire purchase facilities.

Salesmen are eyes and ears for any manufacturing firm. They get necessary information from the market and advise the firm to make suitable changes in its production programme, whenever necessary. However, their importance is more for industrial goods as compared to consumer goods.

10. Advertising and Sales Promotion

(i) To what type of advertising media are consumers users and potential consumers/ users exposed?

(ii) What methods of advertising and sales promotion are used by competitors?

(iii) What will be cost of advertising and sales promotion?

Advertising and sales promotion techniques should be decided keeping in view the size of firm, competition in market, distribution channels and other relevant matters.

11. Servicing for Consumer Durables and Industrial Goods

Are the Servicing facilities offered by the firm adequates in terms of consumer needs? will they cover the following?

(i) Installation
(ii) Education for use
(iii) Repairs and replacement of parts
(iv) Provision of accessory equipments
(v) Periods testing and adjustments

All the information required as per the above check-list may not be available, particularly with an entreprenuer of a small scale industry. It is not necessary to get complete information on all the items metntioned in the check-list. A discussion with the promoter keepingin view the check-list will help the appraising officer to form an opinion whether the promoter will be able to sell his products. The above check-list will also help the promoters to decide proper marketing policy for their products. It will also help in selecting proper product-mix to suit the requirement of the market.

Sources of Market Information

The sources of market information can be classified as primary sources and secondary sources. Primary sources are those sources which can directly provide all or part of the information and include consumers, traders, trader's organisations / associations, competing manufacturers, manufacturer's associations, government departments and agencies, research institutions, knowledgeable circles, other financial institutions, banks, consultancy organisation, and last but not the least the client himself who in many instances has prior knowledge and even experience in the marketing of the product under review. Following steps may be taken to collect information from primary sources:

(i) Determine the type of information required

(ii) Determine the source(s) of information

(iii) Design the sample and select the parties to be contacted

(iv) prepare the data collection form or questionnaire

(v) Give prior information to the concerned parties regarding purpose of the visit and the information required. An assurance may have to be given to treat the information as confidential.

(vi) Collect the information

(vii) Analyse the information collected and prepare the market report

It is difficult to collect information from primary sources for all projects and an appraising officer may have to depend on secondary sources of information which include published material pertaining to the product and the market for it. It may be published by Government, research institutions, manufacturer's associations, consultancy organisations, international agencies and even other financial institutions/ banks. Many newspapers, journals and company balance sheets also give information about marketing prospects of many commodities.

Conclusion

A financial institution or a bank may have to take the following steps to analyse the a market for a product:

S.No.	Steps	Remarks
I.	Discuss with the client about the details of the proposed product specification, prospective demand, depth of competition, pricing policy, marketing organisation, distribution channels, advertising, sales promotion policy etc.	The client is the best source of information on these aspects. However, data given by the client need further checking.
II.	Collect data, within the fiancial instution/bank	Internal sources can be as under: (i) Any proposal of similar or substitute product financed in the past and its performance regarding marketing, if production has already started (ii) Past studies on the market about similar or substitute products (iii) Data bank of the market research department, if any (iv) Library of the organisation for publications, news paper clippings etc.

III.	Assess the adequacy of the data from internal sources. If data is not available or found inadequate: (i) Determine the data that needs to be collected (ii)Assess the sources of information	The determination of the data that needs to be collected can be decided keeping in view the size of the project, time and personnel available for the study and the information already available within the organisation.
IV.	Collect the information	The information can be collected from primary and/or secondary sources. The details of sources of market information have been discussed in an earlier paragraph.
V.	Analyse the information	Analysis may often involve preparation of tables and use of various statistical techniques.
VI.	Evaluate the marketing strategy proposed by the client in the background of the market information analysed	Discuss with the client. If necessary, change the original product-mix and marketing strategy proposed by the client.
VII.	Prepare a market report	Market reports need to be clear, precise, as brief as possible, logical and adequate for decision making.

VIII.	Code, classify and preserve market report	Preservation of market reports will be helpful for evaluation of marketing strategy for future projects and follow-up of present projects.

While preparing profitability estimates, price of the product and selling expenditure should be estimated keeping in view the price structure of the industry, firm's position in the market, its distribution system and other relevant matters.

The gateway to profit is sales. A unit with excellent facilities of production may also incur losses if it is not able to sell its product. It is easier to own a factory but difficult to own a market. Therefore, proper study of demand, market environment, pricing policy, distribution system, packing, sales promotion, etc. should be done before sanctioning the loan. Even after the commencement of production, a close watch on the market is necessary to take corrective steps, whenever necessary.

Review Questions

1. Explain the various demand forecasting techniques to be used in commercial appraisal.

2. What are the various aspects of marketing appraisal?

3. What are the sources of market information?

4. Explain the steps involved in collection of information from primary sources.

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LESSON 10

EVALUATION OF FINANCIAL ASPECTS - FINANCIAL PROJECTIONS

In assessing the financial viability of a project, it is helpful to look at the forecasts of financial condition and financial flows. Financial projections include profitability estimates (estimates of working results), cash flow estimates and projected balance sheets. They are inter-related and prepared on the basis of cost of the project, sources of finance and various assumptions of profitability estimates.

Profitability Estimates

Profitability estimates are estimates of expected sales realisations and expenses to be incurred by the unit. Excess of sales realisation over expenses indicates the expected profit of the unit. Verification of profitability estimates is highly essential for the proper appraisal of a term loan proposal. The borrower may be tempted to give a bright picture of his product to enable him to get finance from banks and financial institutions. It is the duty of the appraising officer to verify the figures given by the borrower. Mere checking of arithmetical calculations of various figures is not sufficient. The basis of various figures should be ascertained and checked to satisfy that profits shown in the profitability estimates are realistic.

Various items included in profitability estimates can be verified according to the check list given below:

1. Sales Realisations

(i) Check the project implementation schedule to ascertain whether it is realistic and production will start according to estimates.

(ii) Assume only 40%-50% of installed capacity as production in first year, 50%-80% in second year and 80%-100% in third year depending on the type of activity.

(iii) Assume that entire production is sold and stocks are maintained at the same level (various methods to appraise the demand forecast made by borrowers have been discussed earlier under Commercial Appraisal).

(iv) Take present sale price (It is presumed that if there is any change in sale price, cost of production will also change in the same proportion).

(v) Check sale price with market rates.

(vi) If a percentage of production is controlled, take control price for that portion.

(vii) Deduct excise duty from sale realisation and take net price.

(viii) And other income, if any.

2. Raw Materials and Consumable Stores

(i) Check the requirement of each raw material for production of one unit. This information may be available from industry experience, consultants, suppliers of raw materials, tests, and trials.

(ii) Multiply the requirement of one unit with the total expected production to ascertain the total requirement for the year.

(iii) Take the present price of each component [raw materials and consumable stores] as we have taken sale price at present levels.

(iv) Add transportation and other expenses to be incurred to deliver at the plant.

3. Utilities (Power, Fuel, Water, etc.)

(i) Calculate requirement of power keeping in view the manufacturing process.

(ii) Multiply the total power requirement with the tariff structure of the power supplying company or State Electricity Board.

(iii) Fuel consumption is based on the specifications of the equipment. Find out the fuel price and add the transportation cost for delivery at plant.

(iv) If water is to be purchased, find the price being charged by water supplying undertakings. If water is to be obtained from wells, streams, etc., it is necessary to build up its cost considering power, labour, chemicals, etc. used for supply of water.

4. Repairs and Maintenance

Take low charges of repairs and maintenance in first year and increase them every year. It may be taken in first year around 0.5% for building and from 0.5% to 5% for plant and machinery depending on the nature of machinery. Increase these charges every year over the figure of previous year because longer the life of fixed assets, higher will be the repair and maintenance charges.

5. Wages and Salaries

(i) Check the rquirements of production, staff and workers.
(ii) Check the wage structure in the area of factory.
(iii) Provide 5% increase in wages and salaries every year over the figure of previous year to cover routine increments to be granted to staff.

6. Rent, Insurance, etc.

(i) Find the area and type of space to be taken on rent and rates of rent.
(ii) The cost of insurance will depend on the nature of properties to be insured, the risks proposed to be covered and the value of properties. Generally, institutions and banks are insisting on insurance of the assets charged to them as security. Take the insurance rates and find out total insurance expenditure on the property to be insured.

7. Depreciation

(i) Take 5% depreciation on building, 10% depreciation on plant & machinery and 20% depreciation on miscellaneous fixed assets. Depreciation on plant and machinery should be raised by 5% for every extra shift. In other words, take depreciation for plant and machinery at 15% on two shift basis and 20%, on three shift basis.

(ii) Contingencies provided in the estimation of capital cost of a project should be added to the fixed assets proportionately to ascertain the value of fixed assets for calculating depreciation on them.

(iii) Preliminary expenses upto a limit of 2.5% of the project cost (excluding margin money for working capital) can be written off from profits at the rate of 10% every year over a period of 10 years. If preliminary expenses are more than 2.5% of capital cost, the excess portion and also pre-operative expenses should be added to fixed assets proportionately to ascertain the value of fixed assets for calculating depreciation on them.

(iv) Depreciation can be calculated on straight line method for the purpose of profitability estimates and on written down value method for the purpose of tax calculations. While calculating depreciation on straight line method, the rate of depreciation becomes almost one-third as compared to the rate used for written down value method to have equal number of years to write off 95 per cent cost of an asset. The table on the next page indicates the corresponding depreciation under both the methods.

Rate of depreciation under written down value method (as percentage of written down value)	No. of years taken under written down value method to write off 95% cost of the assets	Corresponding rate of depreciation under straight line method to write off 95% cost of the assets (as percentage of originalvalue)
5%	59	1.6%
10%	29	3.3%
15%	19	5.0%
20%	14	6.8%
25%	11	8.6%
30%	9	10.6%

To illustrate the above point, we take an example of a machine purchased fo: Rs. 1,000/- which is working on three shift basis. If depreciation is provided at 20% by written down value method, it takes 14 years to write off 95% cost of the machine and the corresponding rate of depreciation under straight line method comes to 6.8% to write off 95% cost of the machine over the same length of period. The amount of depreciation to be provided under both the methods will be as under.

	Written down value method	Straight line method
Cost of the machine	1000	1000
Depreciation for I year	200	68
	800	932
Dep. for II year	160	68
	640	864
Dep. for III year	128	68
	512	796
Dep. for IV year	102	68
	410	728
Dep. for V year	82	68
	328	660
Dep. for VI year	65	68
	263	592
Dep. for VII year	53	68
	210	524
Dep. for VIII year	42	68
	168	456

Dep. for IX year	34	68
	134	388
Dep. for X year	27	68
	107	320
Dep. for XI year	21	68
	86	252
Dep. for XII year	17	68
	69	184
Dep. for XII year	14	68
	55	116
Dep. for XIV year	11	68
Residual value of the	14	48
assets-about 5% of the	44	
original cost		

It may observed from the above example that the total amount of depreciation written off in 14 years and the residual value of asset at the end of 14th year is almost equal under both the methods. But the amount of depreciation is lower during initial years and higher in latter years under the straight line method as compared to written down value method. Therefore, many companies, particularly those companies which undertake capital intensive projects, follow straight line method to enable them to debit lesser amount of depreciation to their profit and loss account and utilise the amount thus saved for the purpose of declaration of maiden dividend, as otherwise the shareholders may have to wait for a longer period for maiden dividend. However, depreciation may be calculated on written down value method for the purpose of calculation of tax.

8. Administrative Expenses

Director's fees, salary of administrative staff, audit fees and other miscellaneous expenditure to be incurred on administration are included in this cost. Take the total requirement of the administrative staff and their salary structure to ascertain administrative cost. The quantum of administrative expenses depends on the nature and magnitude of the administrative set up.

9. Selling Expenses

Presume a percentage of sale as selling expenses. The percentage should be decided keeping in view the type of product, packing charges, distribution system and other market conditions prevailing in the industry. The marketing strategy to be adopted by the unit should be taken into consideration while verifying the estimates of selling expenses.

10. Interest on Term Loan

(i) Interest on term loan is calculated according to the present rate of interest charged by the banks and institutions who propose to grant term loan.

(ii) Interest amount will be reduced according to the repayment schedule of term loan.

11. Interest on Bank Borrowings

(i) Find out the total requirement of working capital.

(ii) Take the bank borrowings likely to be made available against the total working capital requirement.

(iii) Take the rate of interest to be charged by the bank andfind out the interest charges.

12. Profit

After deducting the above expenditures from the sales realisations, the profit before taxation is shown in financial projections. Tax is calculated according to the present tax structure and tax concessions, if any, available to the company are considered

while calaculating the amount of taxation. After deducting the amount of taxation, the net profit is ascertained. The dividend proposed to be declared by the company should be lower than the net profit available to it.

Although the actual profit of the unit will be different than the estimated figure, the above scrutiny may ensure that the variation is minimum possible. In the case of existing companies, separate profitability estimates should be prepared for the projects to be financed by bank/institutions and also combined profitability estimates of the existing operations and proposed new operations.

Cash flow estimates

Cash flow estimates are prepared to ensure that the unit will have necessary cash with it and it will not face liquidity problem. The cash flow estimates include sources of funds and their disposition (uses). While profitability estimates are prepared only from the year in which the unit is likely to commence production, cash flow estimates are necessary for the construction period also to ensure availability of cash according to the requirements of the project.

Source of funds may include following items:

(i) Share capital
(ii) Term loan/Debentures
(iii) Net profit after depreciation and writing off preliminary expenses but before interest and taxes
(iv) Depreciation
(v) Preliminary expenses written off
(vi) Deferred credits
(vii) Trade credits
(viii) Bank borrowings
(ix) Capital subsidy from Central Government in respect of project being undertaken in notified backward areas
(x) Development loans/Sales tax loans in notified areas
(xi) Un secured loans and deposits
(xii) Any other sources

While examining the sources of funds, we must ascertain the period in which the company is likely to raise share capital, term loans, deferred credits, development loans, capital subsidy, unsecured loans, etc. and it should match with the requirements of the project according to its implementation schedule. Net profit is shown as a source of funds after providing for depreciation and writing off preliminary expenses, but before interest and taxes. As the amount of depreciation and preliminary expenses written off remains within the business, it is shown separately as a source of funds. The payment of interest and taxation is shown as disposition of funds because net profit is taken as a source of funds before interest and taxes. The figures of net profit, depreciation, preliminary expenses written off, if any, interest and taxation are taken from profitability estimates.

It is presumed that the level of production, current assets (inventories and book debts) and current liabilities (trade credits and bank borrowings for working capital) will remain in the same proportion throughout the projection period. Therefore, inventories, book debts, trade credits and bank borrowings will increase with the increase in utilisation of capacity or increase in the level of expected production in first 2-3-4 years. Once utilisation of capacity and expected production is presumed to remain stable at a particular level, there will be no change in inventories, bank debts, trade credits and bank borrowings because, they are expected to remain in the same proportion with the level of production.

Disposition or uses of funds may include the following items:

(i) Capital expenditure
(ii) Preliminary expenses
(iii) Current assets-Increase in level of inventories and book debts
(iv) Decrease in term loans/debentures/deferred credit
(v) Decrease in secured loans/public deposits
(vi) Repayment of bank borrowings
(vii) Interest
(viii) Taxation
(ix) Dividends
(x) Any other payments

Use of funds for capital expenditure and preliminary expenses should be shown according to the requirements of the project estimated while examining the capital cost of the project. The level of inventories and book debts will increase in first 2-3 years with the increase in the level of production. Decrease in term loans/debentures/ deferred credit/unsecured loans is shown according to the proposed repayment schedule. The amount of interest, taxation and dividend can be taken from profitability estimates.

The difference between sources and uses of funds indicates the net cash surplus or deficit arising out of movements of funds in that year.

Projected Balance Sheets

Projected balance sheets are prepared on the basis of profitability estimates and cash flow estimates. The position of share capital, term loans, sundry creditors bank borrowings, current assets, etc. is ascertained at the end of each year, according to the movements shown in cash flow and profitability estimates. Fixed assets are taken after deducting depreciation provided in profitability estimates. Preliminary expenses are taken after deducting the amount which is already written off from the expected profit of the unit. Cumulative surplus shown in profitability estimate represents the position of reserves at the end of each year. Closing balance shown in cash flo3w estimates represents the position of cash and bank balances at the end of each year. It should be remembered that balance sheet is a snap shor picture of the financial position at the end of each year and the total of its assets side will be equal to the total of its liabilities side.

Sensitivity Analysis

It is impossible to have the actual results exactly according to projections. If actual results are plys or minus 10 per cent of projections, it can be considered that the work of projections has been done very well. Debt-service coverage ratio, break even point and many other ratios are calculated on the basis of financial projections. In fact, even the repayment schedule of term loans is drawn on the basis of surplus shown in financial projections. If financial projections go wrong and expected surplus is not available with the unit, the repayment of term loan may face difficulties.

Although actual results will be different than the figures shown in projections, proper verification of various assumptions will ensure that variation between actual results and projections is minimum and a project which is considered viable may not become unviable. Projected profit may change owing to changes in the cost of project, cost of production, volume of production or selling price. The appraising officer should ascertain the most sensitive areas of his project. If working results of a project are highly sensitive to a particular variable, sufficient study should be made to find out the probability of a change in that variable. If it is felt that a particular assumption which is important for the project is likely to change, sensitivity analysis should be done and separate profitability estimates should be prepared with the change in assumption. For example, if it is felt that cost of raw materials may go up by 10% without any increase in sale price, separate profitability estimates should be prepared with 10% increase in the cost of raw materials to find out whether the project will be viable even after the increase in the cost of raw materials. Similarly, separate profitability estimates can be prepared with the expected changes in other assumptions to find out whether the project remains viable even after these changes in assumptions. This type of analysis is called sensitivity analysis and it indicates the degree of cushion available in the profitability of a project to withstand changes in assumed conditions and shortfall in expected results. It should be done for such projects where proper assumptions cannot be made regarding important variables.

Review Questions

1. Explain the points to be considered by a lending banker while verifying profitability estimates.

2. What is a projected balance sheet?

3. What are the uses of sensitivity analysis?

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LESSON 11

RATIO ANALYSIS

Ratio indicates the relationship between two or more than two (variables). Many important items like sales, profit, net profit, debt, equity, current assets, current liabilities, etc. do not give much information if each figure is studied in isolation. If a ratio is calculated between the related items, a banker can get meaningful information about the borrowing unit. Ratios are useful for comparative study of various units and also of various years' working of the same unit.

Ratio can be calculated for the past record as well as for the future. past record can be studied only in cases of the existing undertakings by analysing their balance sheets. Future records can be studied for existing undertakings as well as new undertakings by analysing their financial projections. Ratios should be calculated from the figures of balance sheets to study past record and from figures of financial projections to study the future.

Many ratios can be calculated to study financial position and working of a unit by applying different formulae. In order to have comparative study of several units and also several years of the same unit, it is necessary to follow uniform formula for calculating a particular ratio. As mentioned in earlier chapter on sources of finance, all-India financial institutions are having common application form and common appraisal. They also have co-ordination for supervision and follow-up. Therefore, they have developed common approach for calculating various ratios used for appraisal (pre-sanction) and follow up (post-sanction). Important ratios calculated by financial institutions are as follows.

I. Loan Safety Ratios or Appraisal Ratios

(i) Debt-equity ratio (Term liabilities to owned funds)
(ii) Current ratio (Current assets to current liabilities)
(iii) Debt-service coverage ratio

(iv) Fixed assets coverage ratio
(v) break-even point
(vi) Internal rate of return

II. Profitability Ratios

(i) Profit before interest, lease rentals and depreciation (PBILD) to total income
(ii) Operating profit to total income
(iii) Return on capital employed
(iv) Earnings per share (EPS)
(v) Price earnings ratio
(vi) Dividend payout ratio
(vii) Interest coverage ratio

III. Growth Ratios

(i) Increase in PBILD
(ii) Increase in net manufacturing sales
(iii) Increase in gross fixed assets

IV. Turnover Ratios

(i) Current assets holding-ratio
(ii) Raw materials holding ratio
(iii) Stores holding ratio
(iv) Work-in-process holding ratio
(v) Finished goods holding ratio
(vi) Collection ratio
(vii) Total income to net fixed assets ratio
(viii) Capital turnover ratio

V. Operating Ratios

(i) Raw materials to total cost
(ii) Outside purchase to total cost
(iii) Consumable stores to total cost
(iv) Power, fuel and water to total cost

(v) Salaries and wages to total cost
(vi) Marketing and selling expenses to total cost
(vii) Interest on lease rentals to total cost
(viii) Depreciation to total cost
(ix) Other residuary cost to total cost

VI. Other Ratios

(i) Export sales to net manufacturing sales
(ii) Imported raw materials and stores to total raw materials and stores
(iii) Gross value added to capital employed
(iv) Break-up value of equity share

Important ratios as used by the FIs are studied below:

1. Debt-Equity Ratio

(Term Liabilities to Owned Funds)

This ratio indicates the relationship between term liabilities and owned funds and helps in assessing the capital gearing. As it was explained while discussing sources of finance, debt is cheaper to finance a project as compared to equity owing to taxation policy. While dividend on shares has to be paid from net profit after payment of tax, interest paid on borrowings is considered as an item of expenditure for arriving at profit for calculating tax. But a certain amount of equity is necessary to have cushion for debt. Higher the debt equity ratio, lower will be the margin available to the banker for its term loans.

All items of capital and liabilities can be divided into (a) current liability, or (b) long term liability, or (c) equity on the basis of the period during which the liability is repayable. The instalments of the term debt repayable within one year and preference capital redeemable within one year should be treated as current liability and excluded for the purpose of long term debt-equity ratio. Similarly, fixed deposits repayable after one year should be treated as long term debt for the purpose of long term detb-equity ratio and excluded from current liabilities. Preference share capital, sales tax loan and

other incentive loans should be treated as quasi-equity and they may be included in equity only upto the period of time when their redemption/repayment is due after three years. Thereafter, the preference shares.sales-tax or other incentive loans should be treated as part of liabilities.

The following items should be included in debt.

(i) Long term loans/deposits
(ii) Debentures-convertible debentures to be treated as debt (except that part of debentures which is compulsorily convetible into equity) until they are converted
(iii) Preference share capital redeemable within three years
(iv) Sales tax loan repayable within three years
(v) Other incentive loans repayable within three years
(vi) Future lease rentals payable
(vii) Working capital term loan
(viii) External commercial borrowings
(ix) Foreign suppliers' credit
(x) Deferred credit
(xi) Deferred interest
(xii) Unsecured loans and deposits

It may be noted that instalments of all the above dues payable within one year should be deducted from the total to arrive at the figure of long term debt because any liability is considered as long term debt when it is repayable after one year and as current liability when it is repayable within one year.

The following items should be included in the equity:

(i) Equity share capital
(ii) Preference share capital redeemable after three years
(iii) Any other types of share capital
(iv) Free reserve and surplus (development rebate/investment allowance reserve, capital reserve, premium on issue of shares, capital redemption reserve, dividend equalisation reserve, etc. are also treated as free reserves. However reserves created out of revaluation of assets are excluded)

(v) Subsidy
(vi) Sales-tax loan repayable after three years
(vii) Other incentive loans repayable after three years
(viii) Subordinated loans from promoters
(ix) Portion of debentures to be compulsorily converted into equity shares

Accumulated losses, arrears of depreciation, preliminary expenses to the extent not written off and goodwill should be deducted from the above total to arrive at the figure of equity.

The debt-equity ratio is normally allowed around 1.5:1 depending on the nature of the industry, size of the project, priority of the project, gestation period involved, profitability potential, debt-service capacity of the project, risk involved in the project etc. Higher debt-equity ratio can be allowed for large size capital intensive units. Similarly, a liberal debt-equity ratio is allowed in respect of projects set up in less developed/backward areas. It can also be high for certain projects like shipping industry where gestation period is very short.

In case of small and medium projects having capital cost upto Rs.5 crores which are eligible for refinance from SIDBI/IDBI, higher debt equity ratio may be allowed. As per the norms prescribed by SIDBI, debt-equity ratio may be allowed at 3:1 for term loans upto Rs.10 lakhs and 2:1 for term loans above Rs.10 lakhs.

In case of modernisation/rehabilitation assistance, flexible approach is adopted for debt equity ratio depending upon the profitability of the individual project.

It may be observed from the above that institutions have adopted flexible approach in regard to debt-equity ratio depending on various relevant factors.

In order to find out overall debt position and capital gearing of the u nit, financial institutions have recently started calculating total debt-equity ratio where in the total liabilities-both short term and long term-are compared with the equity. However, no norms have been suggested for this ratio so far.

2. Current Ratio
(Current Assets to Current Liabilities)

This ratio indicates the liquidity position of a unit. Following items should be included in current assets:

(i) Cash and bank balances
(ii) Investments
(a) Government and other Trustee Securities
(other than for long-term purposes e.g., Sinking Fund, Gratuity Fund, etc.)
(b) Fixed deposits with banks
(iii) Receivables arising out of sales other than deferred receivables (including bills purchased and discounted by bankers)
(iv) Instalments of deferred receivables due within one year.
(v) Raw materials and components used in the process of manufacture including those in transit
(vi) Stock-in-process including semi-finished goods
(vii) Finished goods including goods in transit
(viii) Other consumable spares
(ix) Advance payment for tax
(x) Pre-paid expenses
(xi) Advances for purchase of raw materials, components and consumable stores
(xii) Payment to be received from contracted sale of fixed assets during the next 12 months.

Following items should be included in the current liabilities:
(i) Short term borrowings (including bills purchased and discounted) from (a) banks, and (b) others
(ii) Unsecured loans
(iii) Public deposits maturing within one year
(iv) Sundry creditors (trade) for raw materials and consumable stores and spares
(v) Interest and other charges accrued but not due for payment
(vi) Advance/Progress payments from customers
(vii) Deposits from dealers, selling agents, etc. However, if such deposits are payable only when the dealership/agency is terminated, they may be treated as term liabilities

(viii) Instalments of term loans, deferred payment credits, debentures, redeemable preference shares and long term deposits payable within one year

(ix) Statutory Liabilities

(a) Provident fund dues

(b) Provision for taxation

(c) Sales-tax, excise, etc.

(d) Obligations towards workers considered as statutory

(e) Any other statutory liability payable within one year

(x) Miscellaneous Current Liabilities

(a) Dividends

(b) Liabilities for expenses

(c) Gratuity payable within one year

(d) Other provisions

(e) Any other payments due within one year

Current assets should be more than current liabilities to provide necessary margin to the banker for working capital finance. Banks are providing working capital finance according to second method of lending, recommended by Tandon Study Group. As per the second method of lendins, atleast 25 per cent of total current assets should be financed from long term funds (owned funds and term borrowings) and it gives a minimum current ratio of 1.33:1. Therefore, while estimating the total requirement of 0long term funds for new projects, margin money for working capital should b e calculated at 25 percent of the expected total current assets. The requirement of margin money for working capital should be included in the capital cost of the project and long term resources should be provided to finance it like other fixed assets.

If the current ratio of any unit is less than 1.33, efforts should be made to raise the long term sources (owned funds and term borrowings) to provide sufficient marging to the banker for working capital requirements.

3. Debt-service Coverage Ratio

This ratio indicates the capacity of the unit to repay term loan and interest thereon. The formula for calculating this ratio is as under:

$$\frac{\text{Profit after tax + Depreciation + Interest on term debt + Lease rentals, if any}}{\text{Repayment of term loan + Interest on term debt + Lease rentals, if any}}$$

The above ratio should be calculated during the entire repayment period separately for each year and also as an average for the entire repayment period. The average debt-service coverage ratio (DSCR) should be computed by taking the total of all values of the numerator and denominator for the entire repayment period and not by taking an average of DSCRs for each year. This ratio should be generally about two. As this ratio indicates the capacity of a unit to repay the term loan, it is a very important ratio for a term lending institution. A term loan may not be repaid if the concerned unit does not generate profit. Repayment of term loan without generating profit will lead to reduction in working capital, tight liquidity position and further deterioration in the working of the unit. Therefore, repayment schedule should be drawn on the basis of profitability estimates.

4. Fixed Assets Coverage Ratio

Term loans are generally sanctioned against the security of fixed assets. The excess of fixed assets over term loans secured by them provides margin on security. In order to find out the available security cover, fixed assets coverage ratio may be calculated by the following formula:

$$\frac{\text{Net fixed assets + Capital work-in-progress}}{\text{Deferred credits + Term loans + Debentures secured by first charge over fixed assets + Other loans having pari passu charge on fixed assets}}$$

In case of existing units, fixed assets to be created for implementation of the project are added to the present net assets (gross fixed assets minus depreciation). Similarly, proposed term loans are added to existing term loans if both have pari passu charge on fixed assets. If any fixed asset is having specific charge for a particular loan, the amount of such fixed asset and the loan should be excluded. If the amount of existing fixed assets includes any addition by revaluation, it should be deducted to find out the present net fixed assets.

In case of new units, proposed fixed assets will cover the proposed term loans. Proposed fixed assets will be equal to the entire capital cost of a project except those preliminary expenses which will not be capitalised. The provision for contingencies provided while estimating the capital cost of a project forms a part of fixed assets because the amount of the provision will be utilised, if necessary, for creation of fixed assets.

The fixed assets coverage ratio depends on debt-equity ratio. Higher the debt-equity ratio, lower will be the margin available because the amount of term loans will be higher for creation of fixed assets. As now a-days emphasis is more on purpose-oriented advances than security-oriented advances, higher emphasis is given on debt-service coverage ratio to ensure repayment of term loans. Sometimes, financial institutions and banks are asking for collateral security or personal guarantee of promoters, if they find the risk involved in the project is very high.

5. Return on Investment (ROI)

In the group of profitability ratios, this is the most important one which indicates the earnings of the unit on its total capital employed. This is calculated by the following formula:

$$\frac{\text{Profit before interest and tax (EBIT)}}{\text{Total capital employed}} \times 100$$

Capital employed means the total amount of the funds invested in the business It can be computed by any one of the following formulae:

(i) Equity Share Capital + Preference Share Capital + Reserves and Surplus + Long term loans including long term liabilities - Miscellaneous expenditure including loss appearing on asset side; or

(ii) Net fixed assets + current assets - Current liabilities.

One important thing that a banker should keep in view is that even the intangible assets like patents, goodwill should also be taken into account while calculating the figures of capital employed, if these assets have been paid for. However if they are totally fictitious assets with no benefit to the firm like losses, they should be excluded. This ratio is very important for making comparison between performance of various units within the same industry.

Conclusion

It may be observed from the above that various ratios are calculated to study various aspects of a unit. However, all ratios do not have equal importance to a term lending institution. Debt equity ratio and debt-service coverage ratio are vital for a term lending institution. Profits earned by a unit and repaymnet schedule of the term loan are reflected in debt-service coverage ratio. Similarly, debt-equity ratio indicates the amount of cushion available to the term lending institution. Current ratio is very important for a bank providing working capital finance.

It may also be mentioned that a ratio by itself does not have much significance unless it is compared with an appropriate standard. The comparision can be done from one company to the average of the industry and also one year to other years of the same company depending on the nature of the ratio, object of the study and availability of data.

Review Questions:

1. What is DER? How is it computed?

2. List down the current assets and liabilities of an enterprise

3. What is DSCR? What are its implications?

4. Explain the features of various ratios used by the lending institutions for pre sanction appraisal?

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MBM DE - PAPER 6 - PROJECT FINANCE

LESSON 12

DISCOUNTED CASH FLOW TECHNIQUES

A Project should earn sufficient return which should at least be equal to the cost of the funds invested in it. If many alternative proposals are available for the investment, the investor should make a comparative study of the return on various proposals. Following methods have been suggested for evaluating the profitability of industrial projects:

(1) Pay Back Method
(2) Average Rate of Return Method
(3) Net Present Value Method
(4) Internal Rate of Return

Pay Back Method

The object of this method is to ascertain the period required for recovering the entire investment made in a project. The cash inflow includes net operating profit after adding back to it the amount of depreciation on fixed assets and amortisation of intangible assets, if any, less income-tax payable during the year. The cash inflow is accumulated, year by year, until it equals the original investment. The length of time required for total cash inflow to recover the original investment is called the pay back period. For example a project needs original investment of Rs.1000 and its estimated cash inflow (net operating profit + depreciation and other non-cash write offs added back-income tax) is as follows:

Original Investment: Rs.1000

Year	Cash inflow of each year	Cumulative Cash inflow
1	100	100
2	150	250
3	250	500
4	300	800
5	300	1100

Pay back period to recover original investment of Rs.1000 comes to 4 years and 8 months (Rs.800 is recovered in 4 years and to recover balance amount of Rs.200, 8 months are required because the rate of recovery is Rs.25/- per month (300 / 12) in fifth year).

Although the calculation of pay back period is simple, it ignores the time value of moeny and does not take into account the income which may be received beyond the pay back period. Sometimes, a project having higher pay back period may be better than lower pay back period owing to higher return after pay back period.

However, this method can be used where emphasis is on avoidance of longterm risk or on the liquidity value of investment. For example, while investing in a foreign country where political stability cannot be forecasted for a long period or while investing in a plant which is likely to become obsolete shortly, this method can be used to judge suitability of investment.

Average Rate of Return Method

Under this method, the entire life of a project is taken into account, unlike the pay back period. An average of the annual net operating profits (after depreciation) for the entire life of the project is taken and rate of return on original investment and average investment is calculated. Average investment of one year can be ascertained

by taking the average of opening and closing book value of the investment in the year. The grand average of such average investments of all the years is obtained to know the average investment for the project. Average profit is divided by original investment and average investment to get the rate of return on them.

An example giving comparison of three projects by average rate of return method is given below:

Comparison of three projects by **AVERAGE RATE OF RETURN METHOD**

(Amount in Rs.)

Net operating profit (after de[recoation)	Project 'A'	Project 'B'	Project 'C'
Year I	300	50	300
Year II	400	150	300
Year III	400	200	300
Year IV	200	800	300
Year V	200	300	300
Year VI	-	-	300
Total profit	1500	1500	1800
Life of project	5 years	5 years	6 years
Average annual profit	300	300	300
Original investment	2000	2000	2000
Return on Original Investment	15%	15%	15%
Return on Average Investment (presuming Average Investment at Rs.1000)	30%	30%	30%

It may be observed from the above example that income received in earlier years is more for project 'A' as compared to project 'B'. But this method does not

give any importance to the time value of money. Further, total income of project 'C' is more than project 'A' and 'B'. But its annual average is same because the life of the project is longer than that of the other two projects. This method does not take into account the life differential of projects.

Time Value of Money-Discounting Technique

Pay back method and average rate of return method do not consider the time value of money. The initial amount incurred for acquisition of assets to inplement a project and income received from the project in future is given equal importance under the above two methods. But i n fact the value of moeny received in future is not equivalent to the value of money invested today. In other words, a rupee in hand now is more valuable than a rupee to be received in future because cash in hand can be invested elsewhere and interest can be earned on it. For example, if Rs.100 is invested at the annual interest of ten per ent, it will increase as under:

Rs.100 today is equal to
Rs.110 after one year (Rs.100 + Rs.10 of interest)
Rs.121 after two years (Rs.110 + Rs.11 of interest)
Rs.131.1 after three years (Rs.121 + Rs.11.1 of interest), and so on.

The above example gives an idea of the compounding increase of the present value in future. The opposite of compounding is called discounting. If we want to know the present sum from the further sum, we have to discount the future sum. Taking the above example, it can be said that Rs.110 after 1 year is equal to Rs.100 today or Rs.121 after two years is equal to Rs.100 today or Rs.133.1 after three years is equal to Rs.100 today. It can be expressed as under.

Rs.110 after 1 year is equal to Rs.100 today,
or Re.1 after 1 year is equal to Rs. 100/110 = Rs.0.909 today
Rs.121 after 2 years is equal to Rs.100 today
or Re.1 after 2 years is equal to Rs.100/121 = Rs.0.826 today
Rs.131.1 after 3 years is equal to Rs.100 today
or Re.1 after 3 years is equal to Rs.100/133.1 = Rs.0.751 today

The above example can be expressed by following figures:

Relationship of Future and Present Values
(Interest rate 10 per cent)

	Now	After 1 year	After 2 years	After 3 years
Compounding Discount	Rs.100 ——	Rs.110 ——	Rs.121 ——	Rs.133.1
	Rs.100 ——	Rs.110		
	Rs.100 ----	----	Rs.121	
	Rs.100 ----	----	----	Rs.133.1

Discounting of Present Value factors

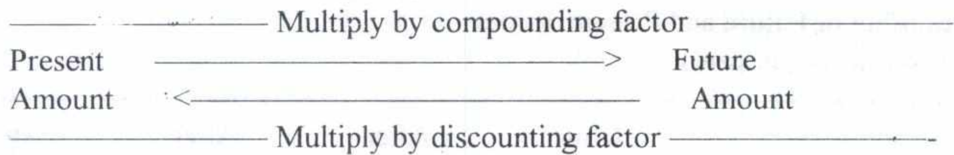
$$\frac{100}{110} \text{ Re.1} = \text{Rs.}0.909$$

$$\frac{100}{121} \text{ Re.1} = \text{Rs.}0.826$$

$$\frac{100}{133.1} \text{ Re.1} = \text{Rs.}0.751$$

If rate of return is 10 per cent, 0.909, 0.826 and 0.751 are the discounting factors to know the present value of future sums after 1,2 and 3 years respectively. If we multiply the future sum with discounting factor, we can get the present value. The discounting factors are given in discounting tables according to the different rates of return and different periods (years). While calculating present value of future sum, take the discounting factor from discounting tables according to the period and rate of return and multiply the future sum by discounting factor to get the present value.

This relationship between present and future values can be shown by following figure:



Mathematically, future value can be calculated by using the following formula:

Future value = present value x $(1 + r)^n$

r	represents rate of interest per period (per year)
n	represents number of period (years)

Likewise, the present value of a future sum can be calculated by using the following formula:

$$\text{Present Value} = \frac{\text{Future sum}}{(1 + r)^n}$$

In practice, the tedious method of calculating present value by means of the above formula is avoided and discounting tables are used. The future value is multiplied by relevant discounting factor taken from discounting tables to get the present value.

Net Present Value Method

After understanding discounting technique, we shall now discuss the net present value method. Under this method, the cash flows of all the years during the expected life of the project are discounted at a pre-determined cut-off rate and net present value is obtained. The cut-off rate should be either equal to or more than the cost of funds. A positive net present value at the cut-off rate indicates that the investment in the project gives profits greater than the marginal investment rate or cost of capital and hence the proposal can be accepted. If net present value is zero, it indicates that the total earnings from the project are equal to marginal investment rate. If net present

value is negative, it indicates that total earnings from the project are less than the marginal investment rate or cost of capital. An example showing calculation of net present value of two projects at 15% discount rate is given below:

COMPARISION OF TWO PROJECTS BY NET PRESENT VALUE METHOD

	Project A			project B		
	invest-ment in 0 year and cash flow in other years	Discount-ing factor at 15%	Present value	Invest-ment in 0 year and cash inflow in other years	Discounting factor at 15%	Present value
Year 0	-1000	-	-1000	-1000	-	-1000
Year 1	+300	0.870	+261.0	+200	0.870	+174.0
Year 2	+400	0.756	+302.4	+300	0.756	+226.8
Year 3	+400	0.658	+263.2	+500	0.658	+329.0
Year 4	+300	0.572	+171.6	+400	0.572	+228.8
Year 5	+300	0.497	+149.1	+300	0.497	+149.1
Total Inflow	+1700		+1147.3	+1700		+1107.7
Total Outflow	-1000		-1000	-1000		-1000.0
Net Present Value			+147.3			+107.7

(1) It is presumed that life of both the projects is 5 years.

(2) Investment in both the projects is Rs.1000 each. Entire investment is done in one year of construction period. The first year of construction period is considered as zero year and no discounting is necessary for zero year. Therefore, present value of investment remains at Rs.1000 each for both the projects.

(3) The cash inflow has been discounted at the rate of 15% presuming that the cost of funds or cut-off rate is 15.

(4) Discounting factors at 15% have been taken fromdiscounting tables for 1st year to 5th year.

(5) Present value of cash inflow has been obtained by multiplying the inflow by its respective discounting factors.

(6) Although total cash inflow in 5 years is same (Rs.1700) for both the projects, project A has higher net present value because cash inflow in initial years is more in project A as compared to that of project B. As discounting is just opposite of compounds, the discounting factor to find present value from future value gets reduced with the increase in years. The timing of cash flow makes all the difference in favour of project A.

If investment in both the projects is same, the project with higher net present value is preferred. But two projects having different investment outlay should not be compared by net present value because it indicates the excess amount in absolute terms. For example projects X and Y are having initial investment of Rs.5000 and Rs.10,000 respectively. Their net present value is as under:

(Amount in Rs.)

	Project X	Project Y
Present value of investments (costs)	-5,000	-10,000
Present value of cash inflow (benefits)	+6,000	11,100
Net present value	+1,000	+1100

If we see the absolute figure of net present value project Y appears better than project X. But in fact project x is better because in project x, an investment of Rs.5,000 provides a net present value of Rs.1,000, whereas in project Y, an investment of twice that amount provides a net present value of only Rs.1,100. In such a situation, profitability index should be calculated by using the following formula to compare the two projects having different investment outlays:

$$\text{Profitability Index} = \frac{\text{Present value of cash inflows}}{\text{Present value of cash outflows}}$$

$$\text{Profitability Index of Project X} = \frac{6{,}000}{5{,}000} = 1.20$$

$$\text{Frofitability Index of Project Y} = \frac{11{,}000}{10{,}000} = 1.11$$

As profitability index of project X is more than that of project Y, it can be concluded that project X is better than project Y. Higher ther profitability index better is the project.

Internal Rate of Return

Net present value method indicates the net present value of the cash flows of a project at a pre-determined interest rate, but it does not indicate the rate of return of the project. In order to find out the rate of return of a project, estimated net cash flows of each year are discounted at various rates till a rate is obtained at which the sum of positive present values is equal to the sum of negative present values or the net present value comes to zero. Such a rate is called internal rate of return. In other words, internal rate of return is that rate of discount which would equate the present value of investments (cash outflows) to the present value of benefits (cash inflows) over the life of the project.

Internal rate of return cannot be determined by just looking at the cash flows. It is calculated by trial and error method. Various discounting rates are applied to the net cash flows until a rate is found that reduces the net present value to zero. Usually cut-off rate is chosen at the starting point. If net present value at the cut-off rate comes positive, the internal rate of return is further calculated by increasing the discounting rate. If net surplus comes negative, the discounting rate is reduced. The exercise is done till a rate is found when the present value of net cash flow comes to zero. As this is a tedious and time consuming process, an interpolation formula can be used after arriving at a range between which the internal rate of return lies. The example of project 'A' given earlier while explaining net present value method can be used to demonstrate the calculation of internal rate of return. First the cash flows are discounted at 15% as already done in the illustration of net present value method. As net surplus comes positive at 15 per cent, the cash flows are discounted at 20 per cent. As net surplus comes positive even at 20% the cash flows are discounted at 25 per cent as under:

(Amount in Rs.)

	Cash flow (1)	Discounting factor at 15% (2)	Present value at 15% (1x2) (3)	Discounting factor at 20% (4)	Present value at 20% (1x4) (5)	Discounting factor at 25% (6)	Present value at 25% (1x6) (7)
Year 0	-1000	-	-1000.0	-	-1000.0	-	-1000.0
Year 1	+300	0.870	+ 261.0	0.833	+ 249.9	0.800	+ 240.0
Year 2	+400	0.756	+ 302.4	0.694	+ 277.6	0.640	+ 256.0
Year 3	+400	0.658	+ 263.2	0.579	+ 231.6	0.512	+ 204.8
Year 4	+300	0.572	+ 171.6	0.482	+ 144.6	0.410	+ 123.0
Year 5	+300	0.497	+ 149.1	0.402	+ 120.6	0.328	+ 98.4
Net present value			= 147.3		24.3		-77.8

As the net present value comes positive at 20 per cent and negative at 25 per cent, the internal rate of return should be between 20% and 25%.

In order to arrive at internal rate of return, the following interpolation formula can be used:

Interpolation forluma

$$\text{Internal rate of return} = \text{Lower discount rate} + \text{Difference between the two discount rates} \times \frac{\text{Net present value at the lower discount rate}}{\text{Absolute difference between the net present value at the two discount rate}}$$

$$= 20 + 5 \times \frac{24.3}{24.3 + 77.8}$$

$$= 20 + 5 \times \frac{24.3}{102.1}$$

$$= 20 + 1.19$$

= 21.19 or say 21%

To test the validity of the above formula, if we discount the cash flows at 21%, the net present value will be almost negligible as under:

(Amount in Rs.)

	Cash flow	Discounting factor at 21%	Present value
Year 0	-1000	-	-1000
Year 1	+300	0.826	+ 247.8
Year 2	+400	0.683	+ 273.2
Year 3	+400	0.564	+ 225.6
Year 4	+300	0.467	+ 140.1
Year 5	+300	0.386	+ 115.8
	Net present value		+2.5

The net present value of 2.5 is too small and can be ignored. The internal rate of return for above example comes to 21%

It may be mentioned that we should not try to interpolate between a range of more than 5 per cent. In other words, while using the interpolation formula, we should ensure that the difference between lower discount rate on which the net present value comes positive and higher discount rate on which the net present value comes negative, is not more than 5. If the difference is more than 5, it is better to use the discounting tables and reduce the difference between the two discounting rates for calculating the internal rate of return with the help of interpolation formula. Information needed for calculation of Net Present Value and Internal Rate of Return

It may be observed from the earlier discussions that the following information is required for calculation of net present value or internal rate of return:

1. Life of the project
2. Cash outflow (amount of investment for capital expenditure and working capital)
3. Cash inflow (benefits of the project)
4. Residual or terminal value of the project
5. Net cash receipt and calculation of interest rate of return
6. Pre-determined cut-off rate or minimum rate of return
7. Cost of capital

1. LIFE OF THE PROJECT

The life of the project means the estimated period (in terms of number of years) during which it will be economically productive. It should be shortest of (a) physical life, or (b) technological life (equipment obsolescence), or (c) product market life (product obsolescence) because a project will become unproductive due to any of the above reasons. The life of a project should not be based on the rate of depreciation used in the books of accounts. Generally, life of an industrial project is taken as 12 years for most of the projects. However, in certain industries such as chemicals, petro-chemicals and electronics, where the rate of technological obsolescence is faster, project life may be taken less than 12 years depending on technological projress and emerging market competitiveness. In the case of hotel industry, where the major assets are in the form of building, a longer project life may be assumed. For shipping industry, life of the project can be taken equal to the balance life of the ship assumed by income tax authorities. A few agricultural projects like growing coconuts, construction of irrigation dams, etc. may have life of 40-50 years. But the present value of the future amount goes on decreasing with an increase in number of years. If we take 50 years as project life, the present value of the income received at 50th year will be almost negligible. Therefore, while calculating internal rate of return, life of a project is generally not taken above 25 years.

2. CASH OUT-FLOW

Resources are used in a project for acquisition of two kinds of assets, viz., fixed assets and current assets. Fixed asset mean project cost minus margin for working capital and interest during construction period. Any expenditure which is incurred after commencement of production for maintaining the life and productivity of fixed assets should be charged to repairs and maintenance. However, expenditures incurred on additions to fixed assets, if any, should be shown in cash outflow of the year in which they are incurred.

In addition to the cost of fixed assets, the requirement of working capital (current assets minus current liabilities other than bank borrowings) are shown in cash outflow. The requirement of working capital increases with the increase in the level of production in the initial years and expected to remain at the level of normal year of operations when maximum production is achieved.

Implementation period or construction period of a project is considered as zero year. However, if implementation period of a project exceeds one year, the first year of the implementation should be treated as zero year, the second as first year and so on. The first year of operations may therefore become the second or the third year depending the implementation period. The life of the project should be taken after implementation of the project. For example, if implementation of a project takes three years and the life of the project is taken for twelve years, the cash flow may have to be prepared from zero year to 14 years to indicate the cash flow position of 3 years of project implementation and 12 years of the project life.

3. CASH INFLOW

Cash inflow includes the profit earned from operations of the project during life of the project and residual or terminal value of the project in the last year of operations. Profit should be taken before interest, lease rentals, depreciation and tax for each year during the estimated life of the project. As interest and lease rentals represent the return of funds employed, profit should be taken before their payment. Similarly, profit is taken before payment of depreciation also because the amount of depreciation remains within the unit and it does not involve cash outflow.

As the purpose of calculating internal rate of return is to find out the income generating capacity of the total funds invested in the project, we should avoid distortions caused by changing the pattern of financing. The amount of interest and direct tax depends on debt-equity position. If the debt-equity ratio is high, the amount of interest will also be high and direct tax may be low because interest is a deductable item of expenditure for the purpose of direct tax. The amount of interest and direct tax will change with the change in debt-equity ratio. Therefore, while calculating internal rate of return for the purpose of comparative study of various projects regarding their income generating capacity, profit should be taken before payment of tax. In other words, interest, lease rentals and depreciation are added back to the profit before tax while taking cash inflow for calculating capacity of various projects.

If we wish to calculate internal rate o return from the point of view of equity holders, benefits of the project should be taken after deduction of the tax. Net profits (Profit after deduction of the tax) should be taken in the cash inflow. In other words, profit after tax should be taken and interest, lease rentals and depreciation should be added back to it.

Financial institutions are calculating internal rate of return by taking profit before tax and also profit after tax. In other words, financial institutions are calculating two internal rates of return, one before tax and another after the tax. In both the cases, interest, lease rentals and depreciation are added back to the profit while taking cash inflow.

If we want to calculate economic rate of return from the point of view of economy, we may have to recast the cash flow on the basis of shadow prices which may reflect socially desirable use of each input and output and calculate internal rate of return from the recasted cash flow.

4. RESIDUAL OR TERMINAL VALUE OF THE PROJECT

Assets will have some value even at the end of the estimated life of the project. The residual value of assets should be added to cash inflow of the last year of the project life. The value of land can be taken at its cost price shown in cash outflow because it does not depreciate. The salvage value of other fixed assets (other than land) can be taken at 5% of cash outflow shown for them. Recovery of current assets used for working capital may be taken at the amount shown for their investment in the cash outflow.

5. NET CASH RECEIPT AND CALCULATION OF INTERNAL RATE OF RETURN

The difference between cash outflow and cash inflow is called net receipt. It may show negative figures in initial years owing to high outflow on investment in fixed assets and working capital assets. It may start showing positive figures when the level of production and profitability is increased. The net cash receipt may be discounted on various discounting rates to know the present value till a rate is ascertained on which the sum of positive present value is almost equal to the sum of negative present value or in other words, the net present value comes to almost zero. The rate of discounting on which the net present value comes to almost zero is called internal rate of return. In order to arrive at the internal rate of return, interpolation formula can be used after arriving at a range of discounting rates between which it lies. Many financial institutions are taking the help of computers to calculate internal rate of return from the cash flow estimates.

6. PRE-DETERMINED CUT-OFF RATE OR MINIMUM RATE OF RETURN

Although pre-determined cut-off rate is not required to calculate internal rate of return, it is necessary to compare the internal rate of return with the predetermined cut-off rate to take a decision regarding financing a project. A project is generally accepted if the internal rate of return is higher than the pre-determined cut-off rate. The cut-off rate is decided on the basis of availability of capital in the economy and the desired growth rate in the industrial sector. Generally, financial institutions in India take 15% as cut-off rate and may provide finance if internal rate of return (before tax) is higher than 15%. A relaxation in the cut-off rate can be allowed if a project is considered highly useful for the economy due to other considerations like increase in employment, distribution of income in favour of weaker sections, development of backward areas or saving/earning of foreign exchange.

7. COST OF CAPITAL

The internal rate of return calculated on the basis of profit after tax should be higher than cost of funds employed in the project. The total cost of a project (capital cost of the project plus working capital requirement in the year of normal operations) can be financed by various sources like equity capital, retained earnings, preference capital, subsidy, convertible debentures, term loans, bank borrowings for working capital, etc. The cost for different sources of funds may be taken as under:

(i)	Equity share capital	:	15%
(ii)	Cash accruals/Retained earnings	:	15%
(iii)	Subsidy/Incentive loans	:	To be treated free of cost
(iv)	Debt (Term loans from institutions/banks, non-convertible debentures, bank borrowings for working capital, unsecured loans from public, etc.)	:	Interest rate charged by the agency providing loan (1-Average applicable tax rate) Average applicable tax rate may be different than the national prevailing tax rate because of various tax benefits available to a unit. The average applicable tax rate can be calculated by the following formula:

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$$\frac{\text{Total tax liability during the life of the project}}{\text{Total operating profit during the life of the project}} \times 100$$

(v) Cost of convertible debentures : The cost of non-converti ble portion may be calcuated on the lines indicated above for the term loans. Cost of convertible portion should be the same as cost of equity. i.e. 15%

(vi) Cost of working capital : The working capital requirementsin the year of normal operations may be financed by bank borrowings, equity/cash accurals, term loans, etc. The cost of each source may be calculated as indicated above.

The total cost of each source can be calculated by multiplying the amount used in the project with its above rate of the cost. The cost of all the sources or the total capital used in the project can be calculated by taking the weighted average of the above cost.

REVIEW QUESTIONS

1. What is pay back period? What are the limitations of pay back period method?

2. What is NPV? Explain its utility in project financing.

3. What are the information needed for calculation of NPV and IRR?

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LESSON 13

BREAK - EVEN ANALYSIS

Break-even point is the point at which the unit neither earns profit nor incurs losses. The cost of production is just recovered at the break-even point. The cost of production can be divided into two categories, viz., Fixed cost and variable cost.

Division of total cost into fixed cost and variable cost is a difficult task because a few expenses can be counted under both the categories. They neither remain fixed nor change in the same proportion in which the level of production changes. Therefore, a banker should follow the uniform policy for each industry to divide the total cost into fixed and variable cost to enable him to compare the break-even point of one unit with another unit in the same industry. IDBI and other all-India financial institutions are observing the following practice for dividing the cost into fixed and variable cost:

FIXED COST (INCLUDING SEMI-FIXED COST)

A certain amount of cost has to be incurred by a unit irrespective of level of production. It will not change with the change in the level of production. Since in the short run, the semi-fixed cost may not vary materially with the level of output, the entire semi-fixed cost is added to the fixed cost for the purpose of calculating break-even point. IDBI and other all-India financial institutions are including the cost incurred on following items into fixed and semi-fixed cost.

(i) Salaries and wages
(ii) Repairs and maintenance
(iii) Administrative and miscellaneous expenses
(iv) Fixed protion of selling expenses
(v) Fixed royalty and know-how payments
(vi) Interest on term debt
(vii) Depreciation on straight line basis (not to be included for cash break-even calculation)

VARIABLE COST OR MARGINAL COST

Variable cost or marginal cost varies with the variation in the level of production. It is presumed that it changes in the same proportion in which the level of production changes. The cost incurred on following items is included into variable cost by IDBI and other all-India financial institutions:

(i) Raw materials
(ii) Outside purchases
(iii) Purchase of goods for resale
(iv) Consumable stores and spares
(v) Packing materials
(vi) Power, fuel and water
(vii) Royalty payments linked to sales
(viii) Variable selling expenses
(ix) Interest on working capital
(x) Other variable expenses varying directly in proportion to output.

SELLING PRICE

Selling price is the price at which the unit is selling its product. It should be taken after excluding excise duty. If it is taken gross and excise duty is also counted in the selling price, the excise duty should be included as an item of variable cost. It is better to take selling price (net of excise duty) and avoid excise duty as an item of expenditure. Other incomes like import entitlements, export incentives, etc. should be included in selling price. In the case of units having multi products, it is presumed that the same product mix will be continued.

CONTRIBUTION AND BREAK-EVEN POINT

Difference between sale price and variable cost is called contribution. The contribution helps a unit to recover its fixed cost. The level of production at which the contribution recovers entire fixed cost is called break-even point. For example, if fixed cost is Rs.6,000, sale price is Rs.12 per unit and variable cost is Rs.6 per unit, the break-even point will be at the production of 1,000 units because the contribution of

Rs.6 per unit (sale price - variable cost) will recover the entire fixed cost of Rs.6,000 at the production of 1,000 units. It can be calculated by using the following formula:

$$\text{Break-even point} = \frac{\text{Fixed cost}}{\text{Sale price - Variable cost}} = \frac{\text{Fixed cost}}{\text{Contribution}}$$

Break-even point can be calculated from figures of balance sheets to study past record and from figures of profitability estimates to study future. While calculating break-even point from profitability estimates, it is better to calculate it on the basis of figures when the unit is likely to achieve the normal level of production.

Break-even point can be expressed in term of

(a) Volume of production, or
(b) a percentage of installed capacity, or
(c) amount of sales

EXAMPLE OF CALCULATION OF BREAK-EVEN POINT

The figures of profitability estimates of Anita Jewels Ltd. can be used to illustrate the calculation of break-even point. It may be observed from financial projections of Anita Jewels Ltd. that the company proposeds to utilise 37.5% of its capacity in the first year, 60.0% in the second year and 93.75% from third year onwards. As the unit is likely to achieve normal level of production in third year, the break-even point can be calculated on the basis of the estimates provided for third year. Volume of production in the third year stands at 75 lakh jewels. while dividing the otal cost into fixed and variable cost, selling expenses have been treated as variable cost because this unit is manufacturing industria goods and a major of selling expenses relates to backing chrges and commission payabe to selling agents which varies with sales. Wages and sales have been treated as semi fixed cost presuming that it may be difficult for the unit to retrench its trained staff even on reduction in the production. In order to maintain good quality, the company does not keep casual labourers. After dividing the total cost into fixed and variable cost, the break-even point has been calculated as follows on the basis of estimates provided for third year when the unit is expected to achieve normal level of production.

Example of Break-even point - AnitJewels Ltd.,

		(Rs. in lakhs) Based on the year of normal level of production (III year-production at 93.75% of installed capacity)
A.	Vriable Cost	
	Raw materials	5.25
	Consumable stores	4.50
	Power, Fuel, Water, etc.	1.15
	Selling expenses	1.50
	Interest on working capital	0.95
	Total	13.35
B.	Fixed cost (including semi-fixed cost)	
	Repairs and maintenance	0.75
	Wages and salaries	4.86
	Rent, Insurance, etc.	0.75
	Depreciation	2.92
	Administrative expenses	1.30
	Interest	3.13
	Total	13.71
C.	Sales Realisation	41.25
D.	Contribution (C-A)	27.90

Break-even point (in terms of volume of production) $= \dfrac{\text{Fixed Cost}}{\text{Contribution}} \times 75$ lakhs jewels

$= \dfrac{13.71}{27.90} \times 75$ lakhs jewels

$= 36.85$ lakhs jewels

In order to find the break-even point have been multiplied by 75 lakhs jewels because the production in that year has been estimated at 75 lakhs jewels.

Break-even point (in term of percentage of installed capacity)

$$= \frac{\text{Fixed Cost}}{\text{Contribution}} \times 93.75$$

$$= \frac{13.71}{27.90} \times 93.75$$

= 46.07% of installed capacity

In order to find the break-even point in terms of the percentage of installed capacity, the figures of break-even point have been multiplied by 93.75 because the utilisation of capacity in that year has been estimated at 93.75% of the installed capacity.

Break-even point (in terms of amount of sales)

$$= \frac{\text{Fixed Cost}}{\text{Contribution}} \times \text{Rs.41.25 lakhs}$$

$$= \frac{13.71}{27.90} \times \text{Rs.41.25 lakhs}$$

= Rs.20.27 lakhs

In order to find the break-even point in term of amount of sales, the figures of break-even point have been multiplied by Rs.41.25 lakhs because sales realisation in that year is estimated at Rs.41.25 lakhs.

It may be observed from the above that the figures of break-even point are coming in various terms as under:

B.E.P. in terms of volume of production	=	36.85 lakhs jewels
B.E.P. in terms of percentage of installed capacity	=	46.07%
B.E.P. interms of amount of sales	=	Rs.20.27 lakhs

The above figures can be cross-checked as under with the help of total capacity of the unit at 80 lakhs jewels and sale price of Rs.0.55 per jewel:

Total capacity - 80 lakhs jewels
B.E.P. in terms of installed capacity = 46.07%

$$\text{Production at B.E.P.} = 80 \text{ lakhs jewels} \times \frac{46.07}{100}$$

= 36.85 lakhs jewels

Amount of sales at B.E.P. = 36.85 lakhs jewels x sale price
= 36.85 lakhs jewels x Rs.0.55
= Rs.20.27 lakhs.

As the unit illustrated above is manufacturing watch jewels for which demand is ensured and it is not likely to face any difficulty regarding procurements of raw material and other necessary inputs, the break-even point at 46.07% of installed capacity can be considered highly satisfactory for this unit.

CALCULATION OF BREAK-EVEN POINT FOR APPRAISAL

While appraising a project, the break-even point should be expressed in terms of the percentage of installed capacity to know the margin of safety in the capacity. The absolute volume of production or amount of sales alone does not convey much meaning unless it is expressed as percentage to total capacity. Therefore, banks and financial institutions use the following formula to know the break-even point in terms of the percentage of installed capacity:

$$\text{Break-even point (in terms of percentage of installed capacity)} = \frac{\text{Fixed cost}}{\text{Contribution}} \times \text{Percentage capacity utilisation at which total contribution is arrived at}$$

As the break-even point is calculated on the basis of estimates provided for the year i n which the unit is likely to achieve normal level of production, the figures of sales, cost, variable cost and percentage capcity utilisation of that year are taken for calculating break-even point according to above formula.

Cash break-even point can be calculcated on the basis of same formula without taking depreciation as part of fixed cost.

UTILITY OF BREAK-EVEN POINT FOR APPRAISAL

Break-even point indicates the levels of production which is necessary to avoid losses. Break-even point can be called bread earning point because a unit earns profit from sales above break-even point. Sales above break-even point indicate the margin of safety avaialable to a unit. Break-even point should be low for units likely to have difficulties regarding marketing or non-availability of raw materials or shortage of power or any other difficulties in achieving utilisation of full capacity. For example, break-even point should be low for the units manufacturing air-conditioners or television sets because their marketing may be difficult and utilisation of capacity. For may be low. Similarly, break-even point for a hotel should be low because all the rooms may not be fully occupied throughout the year. But a unit manufacturing cement can have high break-even point if raw material, power and market for finished product are assured.

A private entrepreneur will prefer to close his plant when variable cost is more than sales price and the situation is not likely to improve in near future. He will lose only fixed cost by clsoing such plant, but if he runs the plant he will lose not only fixed cost but also excess of variable cost over sale price. Whenever banks or financial institutions consider any proposal for rehabilitation of a sick unit, they must ensure that sale price will be higher than variable cost and some contribution will be available to recover the fixed cost and unit will achieve the break even point.

Break-even point can be calaculated with sensitivity analysis also by assuming increase/decrease in fixed cost or variable cost or sale price. Break-even point can be used for comparative study of various proposals within the same industry.

PROMOTER'S CONTRIBUTIONS (SECURITY MARGIN)

A certain percentage of the capital cost of a project should be met by the promoters to have their state in the project. Such contribution can be in the form of share capital, internal generation during the period of implementation of the project, additional capital or unsecured deposits/loans brought or arranged by the promoters. The extent of the promoters' contribution is determined keeping in view the nature of the industry, size of the project, location of the project and background of the promoters. If the financing institutions feel that the risk involved is very high in a particular project due to scarcity of raw materials, introduction of new technology, high competition for marketing etc., they can increase the promoters' contribution. Similarly, if they feel that the promoters of a project have resources to arrange higher for contribution than the minimum prescribed, they can increase the promoters' contribution. Many existing companies can provide higher promoters' contribution in the form of internal accruals and issue of shares/convertible bonds to the existing share-holders on the basis of rights. In case of projects having capital cost above Rs.5 crores, the minimum level of promoters' contribution is generally kept at 25 to 30 percent of the project cost. For the purpose of reckoning core promoters' contribution, 'core promoters' include main promoters, their family members, relatives, groups of companies under their management, friends and associates. Equity contribution from SIDCs can be considered as core promoters' contribution if they give an undertaking for financing overrun and also for not disposing off the shares without prior permission of financial institutions. Equity contribution provided by venture capital companies to assist promoters in making up their stipulated contribution to project cost, can be considered as core promoters' contribution even without insisting on furnishing non-disposal/ shortfall undertaking. However, where venture capital companies themselves are promoters of a project, their contribution to equity should be covered by non-disposal undertaking and they should also furnish shorfall undertaking. The 'non-core promoters' contribution may include contribution to equity by SIDCs, Mutual Funds, etc. (Without non-disposal undertaking) with buy-back arrangements with promoters. Promoters' contribution can be relaxed for projects promoted by first generation entrepreneurs and also for large size projects (i.e. projects costing more than Rs.200 crores).

Central or State subsidy is treated as equity for debt-equity ratio. However, it is not counted as promoters' contribution because the finance does not come from promoters. It is always preferable to have the promoters' contribution in the form of equity shares. However, promoters are sometimes unable to subscribe to sufficient shares to meet the requirements of promoters' contribution, as a minimum percentage of the total shares has to be offered to the public to satisfy listing requirements of stock exchange. In such cases, promoters may be asked to make good the shortfall by providing unsecured loans. The unsecured loans to be provided by promoters should be lower than rate charged by institutions and they should not be allowed to take back the amount without prior approval of the institutions.

Seed capital assistance is provided on soft term to new entrepreneurs for promoting small and medium projects having capital cost upto Rs.5 crores to meet the gap between the normal expected level of promoters' contribution and the actual amount that the promoters could bring from their own resources. The seed capital assistance can be given upto 10 per cent of the project cost to a ceiling of Rs.15 lakhs. The details of this scheme may be obtained from any office of SFCs or SIDCs or IDBI or SIDBI.

Loans on soft terms are provided to meet a part of the promoters' contribution by Risk Capital and Technology Finance Corporation (RCTC), sponsored by IFCI. It gives assistance for medium and large industrial projects having capital cost between Rs.2 crores to Rs.25 crores to certain entrepreneurs, particularly technologists and professionals, who intend to set up risk-oriented projects entailing the use of advanced and/or complex technology or projects for the manufacture of new products for new usages and markets. It does not extend assistance to promoters of projects for the manufacture of conventional products or projects based on conventional technology. The details of the scheme can be obtained from the office of RCTC at Scope Complex, 3rd floor, Core V, 7 Lodi Road, New Delhi - 110 003.

Inorder to assist small entrepreneurs to meet promoters' contribution, equity type of assistance in the form of soft loan is provided from National Equity Fund to set up new projects in a village or a two with population not exceeding 5 lakhs. The capital cost of the project should not exceed Rs.10 lakhs. Assistance is given upto 15 per cent of the project cost subject to a ceiling of Rs.1.50 lakhs per project. With the establishemnt of Small Industries Development Bank of India on 2 April, 1990, the

management of NFE has now been transferred from IDBI to SIDBI. The details of this scheme can be obtained from any office of SIDBI.

Equity type support on soft terms is also provided to ex-servicement and women entrepreneurs to set up small scale industries.

It may be mentioned that seed capital assistance to meet the requirement of promoters contribution can be taken only from one source. Such assistance is avaialble only to those entrepreneurs who do not have sufficient financial resources but are capable to promote viable projects. The details of schemes relating to seed capital assistance may be obtained from any office of SFCs, SIDCs, IDBI and SIDBI.

REVIEW QUESTIONS

1. Distinguish between fixed cost and semi fixed cost.

2. What is marginal cost?

3. What are the points to be considered by a banker while analysing break even point of a borrowing unit.

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Lesson -14

SOCIAL COST BENEFIT ANALYSIS OF A PROJECT - I

Social cost Benefit Analysis (SBCA) is a methodology developed for evaluating investment projects from the social point of view. Used primarily for evaluating public investments (though it can be applied to both private and public investments) SCBA has received increasing emphasis in recent years in view of the growing importance of public investments in many countries, particularly in developing countries, where governments are playing a significant role in economic development. SCBA is also relevant, to a certain extent, to private investments as these have now to be approved by vaious governmental and quasi-governmental agencies which bring to bear larger national considerations in their decisions.

In the context of planned economies, SCBA aids in evaluating individual projects within the planning framework which spells out national economic objectives and broad allocation of resources to various sectors. In other words, SCBA is concerned with tactical decision making within the framework of broad strategic defined by planning at the macro level. The perspectives and parameters provided by the macrolevel plans serve as the basis of SCBA wich is a toal for analysing and appraising individual projects.

RATIONALE FOR SCBA

In SCBA the focus is on social costs and benefits of a project. These often tend to differ from the costs incurred in monetary terms and benefits earned in moretary terms by the project. The reasons for discrepancy are:

* Market imperfection
* Externalities
* Taxes
* Concern for redistribution
* Concern for saving
* Merit wants

MARKET IMPERFECTIONS

Market prices, which form the basis for computing the monetary costs and benefits from the point of view of project sponsor, reflect social values ony under conditions of perfect competition, which are rarely, if ever realised by developing countries. When imperfections obtain, market prices do not refelct social values.

The common market imperfections found in developing countries are:

i) rationing (ii) prescripation of minimum wage rates, and (iii) foreign exchange regulation. Rationing of a commodity means control over its prices and distribution. The price paid by a consumer under rationing is often significantly less than the price that would prevail in a competitive market. When minimum wage rates are prescribed, the wages paid to labour are usually more then what the wages would be in a competitive labour market free from such wage legislations. The official rate of foreign exchange in most of the developing countries, which exercise close regulation over foreign exchange, is typically less than the rate that would prevail in the absense of foreign exchange regulation. This is why foreign exchange usually commands premium in unofficial transactions.

EXTERNALITIES

A project may have beneficial external effects. For example, it may create certain infrastructural facilities like roads which benefit the neighbouring areas. Such benefits are considered in SCBA , though they are ignored in assessing the monetary benefits to the project sponsors because they do not receive any monetary compensation from those who enjoy this external benefit created by the project. Likewise , a project may have a harmful external effect like environmental pollution. In SCBA , the cost of such environmental pollution is relevant though the project sponsors do not incurr any monetary costs.

It may be emphasised that externalities are relevant in SCBA because in such analysis all costs and benefits irrespective to whom they accrue and whether they are paid for or not, are relevant.

TAXES AND SUBSIDIES

From the private point of view, taxes, are definte monetary costs and subsidies are definite monetary gains. From the social point of view, however, taxes and subsidies are generally regarded as transfer payments and hence considered irrelevant.

CONCERN FOR SAVINGS

Unconcerned about how its benefits are divided between consumption and savings, a private firm does not put differential valuation on savings and consumption. From a social point of view , however, the division of benefits between consumption and savings (which leads to investments) is relevant, particularly in capital-scarce developing countries. A rupee of benefits saved is deemed more valuable than a rupee of benefits consumed. The concern of society for savings and investment is duly reflected in SCBA wherein a higher valuation is placed on savings and lower valuation is put on consumption.

CONCERN FOR REDISTRIBUTION

A private firm does not bother how its benefits are distributed across various groups in the society. The society, however, is concerned about the distribution of benefits across different groups. A rupee of benefit going to a poor section is considered more valuable than a rupee of benefit going to an affluent section.

MERIT WANTS

Goals and preferences not expressed in the market place, but believed by policy makers to be in the larger social interest, may be referred to as merit wants. For example the government may prefer to promote adult education or a balanced nutrition programme for school going childern even though these are not sought by consumers in the market place. While merit wants are not relevant from the private point of view, they are important from the social point of view.

MEASUREMENT OF SOCIAL COST BENEFIT

The United Nations Industrial Development Organisation (UNIDO) and the Centre for Organisation of Economic Co-operation and Development (OECD) have come with useful publications dealing with the problem of measuring social costs and social benefits. It may be noted, in this context, that the acutal cost of or revenues from the goods and/or services to the organisation do not necessarily reflect the monetary measurement of the cost or benefit to the society. This is because these figures are grossly distorted on account of restrictions and controls imposed by the government. Hence a different yardstick has to be used for evaluating a particular payment in terms of cost and sacrifice on the part of the society. Such payments are easily valued at opportunity cost or shadow prices to judge their real impact in terms of cost to society for the purpose of social cost benefit evaluation. Of courst, it is almost impossible to measure in precise monetary terms, the real costs and benefits to the society as a result of a project. However, a broad judegement can be made about the acceptability or otherwise of a project on social grounds by looking to the different social aspects associated with the project. The following are some of the indicators/ criteria which can be used for measuring the social costs and benefits associated with the projects.

I. Employment potential

The impact of the proposed project on the employment situation is an important consideration in a developing country like India. A project having higher employment potentiality has to be prefered overa project having a lower employment potential.

II. Capital output ratio

This ratio measures the expected output in relation to the capital employed in the project. Since capital is a source resource, the desirbility of a project can be judged on the basis of the return which the project is expected to give on capital employed in the project. This criterion is particualry important in case of developing countries which suffer from a constraint on capital resources. According to this criterion. a project giving a higher output perunit of capital employed is to be preferred over project giving a lower output.

III. Value added per unit of Capital

This criterion is similar to the capital output ratio.However, in case of this criterion, the estimated value added by a project is cosidered in place of the total value of the output the term 'value added' refers to the costs incurred by an organisation (such as salaries, wages, interest etc) in converting materials into finished goods. Thus the value added by a project can be ascertained by deducting the total value of bought out inputs such as rawmaterial, components etc. from the total value of production.

This criterion is superior to the "capital output ratio" since it considers the net contribution of the firm to the nation's economy. For example if a firm is engaged merely in packing a manufactured product into small lots, it will have high capital output ratio but its cntribution in terms of "value added will be negligible.

While evaluating different projects according to social cost benefit analysis technique, projects having high "value added" contents are to be ranked high.

IV. Savings in foreign exchange

The impact of the project on the foreign exchange reserves of the country is also a good social criterion for accepting or rejecting a project. In a developing country like India, where the foreign exchange position generally remains tight, this is an important criterion while making appraisal of a project. For evaluating the projects according to this criterion, projects can be ranked according to the net contribution the projects are going to make to the foreign exchange reserves of the country. Projects having greater potentiality in terms of foreign exchange benefits will have priority over other projects.

V. Cost benefit ratio

According to this criterion, the projects are evaluated on the basis of total social benefits and costs associated with the projects. Social benefits for this purpose include all economic and non-economic, internal and external benefits, which the society is likely to receive on account of the project. Similary, the term social cost includes all costs which the society will have to pay whether in monetary terms or otherwise for

the project. While evaluating projects according to this criterion, the projects are ranked according to their cost benefit ratios. A project having the most favourable cost benefit ratio is given the highest preference.

The Centre for Organisation of Economic-Cooperation and Development (OECD) has given the following methodology for working out the social cost benefit ratio relating to a project:

(a) All financial costs of a project during the construction period and the operation stage should be ascertained.

(b) The financial costs so ascertained will have to be converted into social costs. For this purpose, the financial cost, as determined above, should be segregated between cost incurred interms of foreign currency and cost incurred in terms of local currency.

(c) The financial cost incurred in terms of foreign currency will be considered as social cost of equivalent amount without any adjustment.

(d) The local currency cost will be classified into three categories

- (i) Tradeable item costs
- (ii) Labour costs
- (iii) Residual item costs

The computation of social cost of each of the above items is done as follows

Tradeable items cost:

The Tradeable items are those items which are dealt in international market. These items include most of the commodities except water and electricity, which can be theoretically traded in the international market. The social cost of tradeable items is determined on the basis of international prices of the commodities concerned.

Labour Costs:

The computation of social cost of the labour payment involved in project is done by dividing the labour force into three categories-skilled, semi-skilled and unskilled. The social cost of each of these three categories is worked out seperately by adopting the shadow pricing technique.

The term shadow price refers to the rate attached to a factor which is not the normal or actual price paid for it. While determining shadow price, the various benefits and opportunity cost, tangible and intangible, attached to acutal cost incurred on a factor are considered. For example, the shadow price for unemployed peron is much lower than the normal prevailing wage rate. The social costs of labour, according to shadow pricing technique are lower than the total amount of wages paid due to the following reasons:

(i) The society gets back a part of the payments made in the form of direct and indirect taxes.

(ii) Wages paid to labour generate demand for various goods. This requires production of the goods resulting in economic development of the society.

(iii) Wage are paid to the labourers for the work put in by them. Working increases their skill. This, naturally results in development of human resources of the society.

(iv) An industrial project causes shifting of manpower from less profitable and over-employed sector to more productive and profitable sectors resulting in overall better development of the society.

(v) The costs incurred by the industrial project on social security and benefit schemes, such as housing, schooling, medical facilities etc, are off-set by resultant social benefits.

(vi) Employment generation helps is fulfilling the broad social objective of providing employment for different sections of the society.

Residual items costs

These include those items which are neither tradable items nor labour costs. The social cost of these items is ascertained by determining their opportunity cost depending upon the nature of each item of cost.

The total value of social benefits from a project is ascertained by determining the total tradeable value of its finished products. In other words, the social benefits from a project can be judged with reference to the import value of such goods or to the detriment which the society suffer in case they are not produced.

The net difference between the outputs and inputs is the social benefit. The social benefit of each year is then discounted at the accounting rate of return. The total of the discounted figures of the social benefit over the economic life of the project gives the Present Social Value (PSV). If the PSV is positive, the project is socially viable and can be accepted. If it is negative the project is socially non viable and has to be reconsidered.

It may be noted that the technique suggested in the preceding pages for evaluating social cost and benefits is merely illustrative. It is not a perfect and precise technique. A lot of research is still to be done. Moreover, the technique does not take into consideration aspects such as happiness, aesthetic pleasure etc, which areincapable of being quantified. The accountants have therefore, to go a long way before they are in a position to evolve a suitable satisfactory and generally acceptatble technique for conducting social cost benefit analysis.

Review question

i) Explain the resons for discrepancy between social costs and monetary costs

ii) What is SRR? How is it computed?

Lesson -15

SOCIAL COST BENEFIT ANALYSIS OF A PROJECT - II

Apart from SRR,the society friendliness of a project can be judged by the lending institutions in terms of the following parameters also.

i) International Competitiveness

This concept is having more relevance in case of EOUS and those units which are producing import substitution items. International competitiveness can be assessed by giving due weightage to the ability of the poject to

a) ensure zero defective supplies
b) assure just in time (JIT) delivery
c) offer attractive after sales service
d) price on competitive terms
e) fascinate through elegant packging

MATRIX FOR IMPROVING INTERNATIONAL COMPETITIVENESS

	MEDIUM TERM	LONG TERM
Government	a) Macro economic environment b) Detailed plans c) Co-ordination	Efficient and Modern Infrastructure
Entrepreneurs	a) Quality b) Cost effectiveness c) Value addition	Supply availiability -no interruption

2. CONTRIBUTION TO GOVERNMENT REVENUE

The Government helps the entrepreneurs in various ways such as subsides, incentives, tax holidays and other corcessions. In return, every project is expected to contribute towards govenment revene. This may take the form of

* Income tax, wealth tex and professional tax generated through salaries, devidend and interest paid by the unit

* Sales tax, excise duty. customs duty etc, emanating from purchase/sales made by the unit.

* Creation of funds viz, PF Gratuity, Pension Funds and ESI by the unit.

3. PRIORITY

If two or more alternative project proposals are placed before lending institution, such proposals have to be prioritiesed in tune with the national policies and objectives. In general, lending insitutions consider those proposals which tend to consume less capital and local resources. Shorter the gestation period of the project, greater the priority given. Environment aspects are also given weightage.

4. EMPLOYMENT GENERATION

A project creates both direct and indirect employment opportunities. As such the number of employees proposed to be utilised and the extent to which ancillary units are going to be nurtured by the project should be assessed. Some people even say that a project which is not so financially sound can be considered for funding, if it tries to address the problem of unemployment in the country.

5. ECONOMICS OF SCALE

Lending insitutions have to ensure the feasibility of the project in term of its size from the point of view of the society. It is a well known fact that a large sized unit has lot of advantages viz, technology orientation, innovation, quality consiousness,

development of ancillaries etc. On the other hand, they are criticised for environmental hazards, monopoly, exploitation, creating regional imbalances etc.

A small sized unit is having its own strengths such as low capital, labour intensiveness, utilisation of local rawmaterials and technology etc., However, they have some handicaps in the form of poor quality, lack of innovation etc.

By taking all those aspects into consideration lending insitutions have to decide about the size of the project. Large or small,the size should ensure optimum utilisation of society's resources.

Review Questions

i) As a banker how would you evaluate the international competitiveness of a project?

ii) What are the point to be considered by lending institutions with regard to priority. contribution to government reveneue, employment generation and economics of scale?

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LESSON 16

DISBURSEMENT, SUPERVISION AND FOLLOW UP

Sanction of financial assistance after proper appraisal alone is not sufficient for success of a project. Disbursement of funds according to the requirements of the project and close supervision and follow-up are also equally essential. Delay in disbursement may cause delay in implementation of the project which may lead to over-run in the cost of the project. Supervision and follow-up is necessary to anticipate the problems in advance and to take corrective steps before they take a serious turn.

As soon as financial assistance is sanctioned, a letter of intent is issued to the applicant. In addition to usual terms and conditions, special conditions are incorporated in the letter of intent to cover weak links, if any, noticed at the appraisal stage. These weak links may relate to procurement of raw materials and certain essential services, securing performance guarantee from the collaborators, broad-basing of Board of Directors, strengthening of management , organisational set-up, etc.

The borrowing unit is required to convey its acceptance of the terms and conditions within 30 days from the date of receipt of the letter of intent. After, receiving the acceptance of the letter of intent, the term lending institutions prepare a loan agreement setting out the various terms and conditions of the loan and it is finalised in consultation with the borrowing unit. It is necessary that the loan agreement is executed by duly authorised person and in the manner prescribed by the articles of association of the borrowing company. As the power to borrow is vested in the Board of Directors, a resolution of the Board accepting the terms and conditions authorising any Director(s) and/or other person(s) named therein to execute all documents connected with the loan, as also to furnish security in the form laid down by the term lending institutions would be necessary. To facilitate passing of the required resolution, a draft of the resolution is usually given by the term-lending institutions.

After the execution of the loan agreement, the security is created in favour of the term lending institutions. They generally take first charge on fixed assets and a

floating charge on movable assets subject to bank accommodation for working capital finance. If more than one institution or bank is financing a project, the charge ranks pari passu. Institutions are normally prepared to take equitable mortgage instead of the registered legal mortgage to save time and expenditure. The process of examination of title to the properties of the borrowing unit and drawing up of the mortgage deed is lengthy and time consuming. Howeverm time can be saved if the title deeds and other requisite documents are kept ready well in advance and made available to the solicitors appointed by term lending institutions. Solicitors should be appointed as soon as a letter of intent is issued to the company to avoid delay.

Disbursement

Execution of loan agreement and other necessary legal documents is not sufficient for disbursing the amount. The term lending institutions should ensure that the amount disbursed will be utilised for the purpose for which it has been sanctioned. The following information should be furnished by the borrowing unit to the term lending insitutions:-

(i) Physical progress of the project such as the progress made in the acquisition of land, site development, construction of buildings, acquisition of plant and machinery, arrangements made for supply of power, water and other utilities.

(ii) Financial progress of the project-expenditure incurred under different heads upto a recent date and the means of financing. This information should be certified by an auditor for its authenticity.

(iii) Whether the entire financing arrangements for the project have been tied up (copies of letters of sanction from other institutions, banks, brokers, etc. to be enclosed). If not, mention the gap in the arrangements and how it is proposed to be bridged.

(iv) Whether the promoters contribution stipulated in the letter of intent has been actually brought in by the promoters (auditor's certificate giving full details of the promoter's contribution should be enclosed). If entire promoter's contribution has not already been brought in, specific reasons for the inability of the promoters to bring in the requisite amount should be mentioned. A time-bound schedule of bringing in

the balance amount of promoter's contribution should be given. Promoters should also furnish an undertaking for financing the over run in the cost of the project.

(v) Details of proposed utilization of loan for repayment to contractors, machinery suppliers, etc. giving month-wise requirements for the next 2-3 months and sources from which the same are proposed to be met.

(vi) Position of compliance with other important pre-disbursement conditions incorporated in the letter of intent including the condition relating to the broad-basing of the Board and management set-up. Those conditions which are not compiled with should be specifically mentioned indicating the reasons for non-compliance and the steps proposed to be taken to comply with them.

(vii) Certified copy of the resolution passed by the company's Board of Directors authorising any director(s) or any other person(s) to execute the documents and provide security for the insitutional loans.

(viii) Certified copy of the resolution passed by the company in the general meeting for authorising the Board of Directors to mortgage the assets of the company in favour of the financial institutions/banks together with power to take over the management of the business/concern of the comapny (section 293 (I) (a) of the companies Act, 1956).

(ix) Certified copy of the resolution passed by the company in the general meeting for borrowing in excess of its paid-up capital and free reserves (Section 293(I)(d) of the companies Act, 1956).

(x) Opinion from the company's legal adviser stating that the company and its directors have the necessary powers to enter into the loan agreement with the financial institutions/ banks.

(xi) Certificate from the auditors regarding the total borrowings of the company and the amount outstanding on as recent a date as possible.

(xii) A letter from the borrowing company's bank that the amount disbursed by the term lending institutions will be credited in a separate account opened for this purpose and the bank will not exercise lien on it.

After getting the above information, the term lending institutions should ensure that the major terms and conditions have been fulfilled by the company before they disburse the loan amount. However, if certain conditions are not fulfilled and the borrowing company is able to give proper justification for non-compliance, the term lending institutions may disburse the amount if they feel that it is in the interest of the project and the funds will not be diverted. If construction period of a project is long, the disbursement is usually done in instalments depending upon the requirements of the project.

Bridging Finance

Many a time, documentation takes very long time and the delay in disbursement may cause delay in implementation of the project and overrun in the cost of the project. Therefore, bridging finance is being provided by term lending institutions against their commitment for providing term loan.

While providing bridging finance, the term lending institutions obtain the information mentioned earlier which they usually take while disbursing the amount. After establishing the need for finance and ensuring compliance with major terms and conditions of the loan agreement, the bridge loan is provided against hypothecation of movable assets and personal guarantee of promoters/directors. The interim finance or bridging finance is ultimately adjusted with the release of normal loan after documentation is completed.

Banks may also provide bridge loan against the commitment made by them for term loan. They may also consider providing bridge loan/interim finance against commitment made by a financial institution/another bank only in cases, where the lending institution faces temporary liquidity constraint, and subject to the compliance with the following conditions:-

(i) The bank extending bridge loan/interim finance should obtain prior approval of the other bank/financial institution which has sanctioned the term loan.

(ii) The sanctioning bank must also obtain a commitment from the other bank/financial institution that the latter would directly remit the amount of term loan to it at the time of disbursement.

(iii) Period of such bridge loan/interim finance should not exceed four months. Banks should not allow extension of time for repayment of bridge loan/interim finance.

(iv) Banks should ensure that bridge loan/interim finance sanctioned and disbursed is utilised strictly for the purpose for which the term loan has been sanctioned by another bank/financial instituion.

Supervision and Follow-up

Project supervision and follow-up of assisted projects during and after implementation is indeed a crucial exercise to be performed periodically with meticulous care, not only to safeguard the interests of the term lending institutions but also to ensure optimisation of returns on the total investment in the project. Even a project Well-conceived at the appraisal stage could come to grief due to lack of adequate care, supervision and control during implementation and in a dynamic environment even a successfully completed project could run in to difficulties if preventive/corrective steps are not taken at the appropriate time to counter the developments likely to have adverse impact on the health and profitable working of an enterprise. Therefore, proper supervision and follow-up is necessary during and after project implementation. It can be done by the following methods:-

(i) Scrutiny of progress reports
(ii) Analysis of annual financial statements
(iii) Visit/Inspection
(iv) Appointment of nominee directors
(v) Regulatory control
(vi) Discussion with management

(i) Scrutiny of progress Reports

Generally, progress reports of the assisted concern are called for on quarterly basis during implementation stage and at half-yearly intervals thereafter. In the case of

small projects where gestation period is short, the reports may be called for on monthly basis. similarly, if the unit is facing problems which require closer watch, the report may be called for on monthly basis. Frequent reports may also be necessary where product/technique is new and/or where management is weak/deficient. In the case of sick units, a monthly report may be called for. In short, during implementation stage of the project and when closer supervision is required, frequent reports may be called for. It should be ensured that the reports are received and examined promptly as otherwise the submission of reports does not serve the purpose in view.

When the project is at implementation stage, institutions are interested in seeing that the implementation is carried out according to the time schedule envisaged earlier and in accordance with the cost estimates. In the case of completed projects which have gone into production, institutions are interested in seeing that the work of the unit is on satisfactory lines and no problems are faced. Therefore, different forms are used for evaluating the progress of the project during implementation stage and production stage. Forms should be devised in such a way that no undue burden is cast on the assisted concern, while at the same time no material information is left uncovered. Separate industry-wise forms can be devised to simplify the work.

While scrutinising progress reports during implementation stage, following points should be studied:-

(i) Cost of the project

It is very important that expenditure on project is incurred as per the estimates given in the appraisal report. Any overrun in the estimates has to be examined carefully. The reasons for the same and steps taken by the assisted concerns to avoid the over run have got to be examined. There might be genuine reasons for escalation under various heads such as cost of building materials, iron and steel etc, which might have gone up. If escalation is due to increase in the quantity of materials used in the project, it requires deeper probe. Contingency amount used also needs to be checked with reference to increase in expenditures on different heads. Expenses under the head pre-operative expenses are to be examined in detail. This is one of the most sensitive factors which often leads to cost over run. If necessary, the senior executive of the company should be invited for discussion about the reasons for overrun and steps taken to meet the same.

(ii) Time schedule

Another important aspect to be seen is whether the implementation of the project is according to time schedule. Format of the Progress Report should be devised in such a way that any deviation from the targetted date is immediately revealed. Dealy in implementation of a project may be on account of various reasons e.g. late arrival of plant and machinery, delay in disbursement/raising of promoters contribution, non-availability of contribution materials, etc. The assisted unit might be advised/ helped to see the project is not delayed.

(iii) Other important items

Major contracts entered by the company for construction work should be studied. The contract should not only be fair and in the interest of the unit but should also be executed expeditiously. In the case of likely delay, institutions might help the unit to finalise the same at an early date. Reports should also reveal the physical progress of the various items of work. They should be compared with the CPM/PERT Chart and, if necessary, activites may have to be adjusted in such a way that overall delay in implementation of the project does not arise.

While scrutinising the reports during production stage, following points should be studied:-

(i) Production

The figures of licensed, installed and utilised capacity will give the clear picture about the working during the period. It may be seen whether the plant has worked on all working days and if not the reasons might be ascertained. Production may be affected owing to strike in the factory or technical defects or power cut. Other reasons for variation in production may also be verified and remedial measures may have to be intiated.

(ii) Sales

Production alone is not sufficient for the success of the project unless it is sold at profitable price. It may be seenwhether sales are according to targets. Reason for abnormal variations and steps taken by the unit for solving the problems might be stuied.

(iii) Profitability

Progress report should give tentative results of the unit. It may be seen whether budgeted profit is achieved, and if not, reasons for variations might be examined.

(iv) Inventories

This is one of the important items in the progress report which requires constant watch. It should be seen that unnecessary high inventories are not maintained by the company. This will increase the cost of borrowings from the bank. Further, stock of finished goods should be related to the sales of the company. A watch may also have to be kept on the slow moving materials and the reasons for the same.It may be necesary to make enquiries from the company in respect of heavy stock of such materials and steps taken by it to liquidate the same.

(v) Receivables

It is important to see that the receivables are within reasonable limits. Receivables due for more than six months would require special aattention and the company might be advised to realise the same immediately. It may be examined whether the period of credit extended by theunit to its debtors is reasonable keeping in view the practice prevailing in the market and competition for the sale of the product.

(vi) Other Important Items

Apart from the above, institutions have to examine other items such as payables, order book position, working capital requirements, term liabilities, statutory dues, etc.

The problems faced by the unit are generally given in the report. Institutions may examine the same and in case of real difficulties render the required help to the unit.

Progress reports should be scrutinised in the above manner as soon as they are received from the borrowing units and if any deficiency is noticied, corrective steps should be taken by all concerned. Delay in scrutiny of progress reprts may defeat the purpose of submitting them, if necessary corrective steps are not taken in time.

2. Analysis of Annual Financial Statements

The information furnished in annual financial statements (Balance sheet and Profit & Loss Account) should be regrouped on an analysis form designed by institutions to make a comparative study of various Years. Figures should be examined not only in absoulte terms but also in relative terms by working out various ratios discussed earlier in the chapter on ratio analysis to have an idea in perspective. Balance sheets can be used for inter-company comparison of industry. Director's report given with Balance Sheet should be studied to know about the working of the company and its prospects. Whenever, possible, the institutions should depute their representative to attend the shareholder's meetings.

3. Visit/Inspection

Periodic visit and inspection of assisted concerns is one of the major tools used by the institutions to monitor the progress. The frequency and intensiveness of these inspections depend on the magnitude of investment in the project, the stage of its implementation, the strength and reliability of the management of the company, its past performance and the nature of specific problems, if any, faced by the unit. Depending upon whether the project is under implementation or has already gone into commercial production, the types of visit/inspection could be broadly classified into four categories:-

(i) Pre-disbursement visit to make a quick on-the-spot assessment of the physical progress of implementation of the project and to establish the need for the disbursement requested for.

(ii) Periodic (at least half-Yearly) inspection during the construction/implementation period to monitor physical progress of the project. In the case of project involving large outlays or facing certain difficulties these inspections are carried out at more frequent intervals to keep a close watch on the progress.

(iii) Routine follow-up inspection (carried out once a year) of projects that have been successfully implemented.

(iv) Special follow-up inspection to examine specific problem area.

Generally speaking, the approach of inspecting officers should be objective and aimed mainly at assessing the performance of assisted concerns/units, identifying shortcomings, if any, and suggesting remedial steps that should be taken. Following points should be seen while inspecting an industrial unit:

I. Points to be seen during project implementation

(i) Acquisition of land; whether there are any legal hinderances.

(ii) Site development.

(iii) Construction of buildings; bonafides of builders/ contractors.

(iv) Progress regarding acquistion/instaliation of plant and machinery.

(v) Arrangements with regard to technical know-how/ engineering services.

(vi) Recruitment of executives and other essential staff.

(vii) Provision for adequate infrastructure facilities as also disposal of effluents.

(viii) Review of implementation schedule, indicating reasons for dealy, if any

(ix) Expenditure incurred and the sources from which the same was financed.

(x) Budget for the next two quarters; arrangement regarding required finance.

(xi) Whether the loan has been used for the purpose for which it was intended and in case of deviation in respect of any aspect of the project, whether the approval of appropriate authorities has been obtained.

(xii) Reasons for escalation in cost estimates, wherever it has occured.

II. Points to be during operational years

(i) Whether the building, machinery, etc, provided as security are maintained in good order and insured properly.

(ii) Organisational set up of the unit.

(iii) Purchase policies for raw materials and stores and whether the unit is able to obtain smooth flow of requisite quality of raw materials, especially imported raw materials.

(iv) Selling policy for company's products, including pricing policy.

(v) Recruitment policy, particularly regarding the executives.

(vi) Appointment of Consultants, Statutory Auditors, etc.

(vii) Inter-coporate investments (this requires prior approval of financial institutions)

(viii) Lending to the concerns in which the promoter group may be interested.

(ix) Dividend Policy.

(x) Staff and labour policy (strikes, lock-outs, lay-offs or any other events)

(xi) Policy with regard to supervisory/managerial cadres.

(xii) Policy with regard to Research and Development

(xiii) Systems relating to inventory control, internal check, internal audit, costing and budgetary control.

(xiv) Contracts with concerns in which promoters are interested.

(xv) Remuneration/commission, etc. payable to Directors

(xvi) Proposals for expansion/diversification of company's activities; Whether any changes have been effected in the installed capacity.

(xvii) Production programmes for next two quarters.

(xviii) Reports on operations of the company for the previous two quarters and how far the same are in consonance with the targets fixed.

(xix) Payment of interest and repayment of loan instalments to financial institutions and banks as per schedule.

(xx) Discharging of deferred payment liabilities.

(xxi) Discharging of other liabilities in respect of which the financial institutions and / or banks have furnished guarantee.

At the end of the inspection, the inspecting officers should hold a discussion with the senior executives of the unit, mainly with a view to appraising them of the deficiencies observed during the inspection and obtaining their observations regarding action taken or proposed to be taken to remove such deficiencies. This procedure will not only serve the real purpose of inspection but also saves avoidable time and correspondence with the assisted unit on matters which could be settled during such discussions. Where the deficiencies noticed are of a comparatively minor nature and/ or it is clear that suitable corrective action has been or would be taken by the management to remove them, these should not be highlighted in the inspection report.

The inspection report should be divided into tow parts. The first part should be a "Summary of the major findings of the Inspection". In preparing this, the principle of "Reporting by Exception" has to be strictly followed i.e. whatever is normal and as planned/proposed at the time of appraisal need not be reported. Only the problem areas whether they are technical, financial, managerical or any other should be discussed briefly point-by-point and specific conclusion and recommendations of the inspection team should be given at the end. The second part of the report should be in the nature of a comprehensive data-sheet.

The Head of the Follow-up Department of term lending institution should make it a point to discuss the report in general and the conclusion and recommendations in particular, with the inspection team, before making his recommendations to the top management of the institutions on the action to be taken on the findings of the inspection.

It may be emphasised that the whole approach to inspections has to be aimed at achieving operational improvements. Utmost care should be taken to avoid any erroneous impression that the inspection system is procedure-oriented and/or aimed at finding faults.

4. Nominee Directors

Financial institutions are incoporating a condition in their letter of intent that they have a right to nominate a director on the Board of the Company. Although all the participating financial institutions are incorporating such a condition, it is neither necessary nor desirable to have one nominee director from each participating institution, particularly when 5-6 institutions are financing a project. Therefore, financial institutions in their meeting authorise one or two institutions (depending on the size of the company) to nominate one or two directors on the Board of the Company. The nominee director acts as a medium between institutions and the company. If nominee director finds any problem in the company which needs attention of all institutions, he writes to them indicating his views on the same and, if necessary, the matter is discussed in the meeting of financial institutions.

The nominee director should ensure that all important developments relating to the functioning of the company are brought to the notice of the Board. He should

keep a close watch on the issues mentioned earlier while discussing visit/inspection of a project. Whatever is relevant for inspecting officers is also relevant for the nominee directors.

5. Regulatory controls

According to loan agreement, companies are generally required to obtain prior approval of institutions for following matters:-

(i) Appointment / re-appointment / changes in terms of appointment of Managing Director, full-time Director(s) , full-time Chairman and Consultants.

(ii) Appointment / reappointment / changes in terms of appointment of selling agents.

(iii) Proposals for substantial changes in technical, managerial, financial or commercial aspects of the project.

(iv) Proposal to undertake expansion/diversification programmes and changes in installed capacity.

(v) Proposal to make inter-corporate or other investments.

(vi) Proposal to raise additional funds (except for working capital)byway of loans, deposits, debentures, bonds, guarantees, counter-guarantees, deferred credits, etc.

(vii) Proposals for transfer of company's shares from the promoter's group to others.

(viii) Proposal for withdrawl of funds brought in by promoters by way of un-secured loans.

(ix) Proposals for insuring company's assets-insurance to be approved.

(x) proposals for changes in Memorandum/Articles of Association.

(xi) Proposals to take up any general trading activity other than the sale of company's own products.

(xii) Declaration of dividends in certain cases.

(xiii) Proposals regarding issue of bonus and rights shares.

When a proposal is received from the company for approval of any of the above matters, the term lending institutions should study the past record of the company and its future prospects. While dealing with such proposals the institutions can check the growth of unhealthy practices in the assisted units. If the proposal is useful for the company, the approval should be accorded without unnecessary delay. The nominee director(s) appointed by the institutions can render useful assistance in this sphere.

6. Discussion with the Management

Many times several problems are noted while scrutinising progress reports, financial statements, inspection reports and nominee director's report. These problems may need the attention of the top management of the company. If the problems are of serious nature, in addition to writing letters to the company, the head of the follow-up department of the financial institution should call the promoters of the company to discuss with them and try to find a solution.

As institutions and banks are providing more funds than the promoters in most of the projects, they should take active interest in sloving the problems faced by the unit. Financial institutions and banks should create a sense of partnership between them and the management of the assisted concerns. If necessary, financial institutions and banks should take up the matter with the concerned Government departments and other institutions to solve the problems faced by the units. Oflate, the financial institutions and banks have been taking increasingly active interest in solving the problems of assisted concerns. They have helped the entreprenerus in matters like selection of machinery, selection of technical personnel, procurement of rawmaterials, execution of export orders, etc. The confidence created in the minds of entrepreneurs that the financial institutions are genuinely interested in the well-being of the project has prompted the management of a few companies to approach the financial institutions even for settling the differences among the directors, at Board level or with the top managerial personnel. When the Chief Technical Officer of a unit wanted to quit for his better prospects, the Managing Director of the unit looked to the financial instituions

to convince the officer concerned that his leaving the project at that juncture was not in the interest of the project. Such efforts have created a sense of partnership and understanding between the management of the companies and financial institutions. As far as possible, financial instituions should try their best to have good relations with the management of the companies. However, if management of a company does not listen to them even after enough tact and warning, the institutions and banks may have to make efforts to change the management. But changing the management or resorting to the security should be the last resort. In case of difficult projects or projects involving large outlays, a team having representatives of various financial institutions and banks should be constituted for intensive follow-up. A lead institution should be decided for follow-up work of each project. If any serious matter is observed by the lead institution, the attention of other institutions should be drawn, and if necessary, the matter should be discussed in the meeting of financial institutions. Necessary action taken in time may save a unit from becoming sick. The experience gained during project supervision and follow-up also provides feed-back for improving the appraisal system.

7. Recovery of Dues

If a unit is having genuine difficulties, efforts should be made for solving them. However if a unit is not likely to become viable, efforts should be made to dispose off its assets to avoid further deterioration and get funds for recycling. If necessary, banks may approach Debt Recovery Tribunals for expeditious adjudication and recovery of their dues. It may be mentioned that an Act has been passed by the Parliament for expeditious adjudication and recovery of debts due to banks and finanical institutions. The provisions of this Act titled as "The Recovery of Debts due to Banks and Financial Institutions Act, 1993", are applicable where the amount of debt due to any bank or financial institution or to a consortium of banks or financial institutions is not less than Rs.10 lakhs.

The Central Government have, however, been empowered to reduce the lower limit of Rs.10 lakhs but not below Rs.1 lakh, by issuing a notification. It is hoped that the Tribunals set up under the Act will improve the banks recovery position in the suit-filed accounts where a unit is not potentially viable.

Review Questions:

1. What is letter of intent? What are its contents?

2. What is bridging finance ?

3. Explain the utility of inspection as a tool of followup.

4. As a lending banker, how would you undertake follow-up of advances ?

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LESSON 17

HOW TO IMPROVE RECOVERY

With the adoption of prudential norms banks are now fully vigilant about the quality of their loan assets and several steps are being taken by them to reduce non performing assets. Each bank is required to have a 'Loan recovery policy' giving details of the strategies to be adopted for recovery of dues, periodwise targetted level of reduction in NPAs, norms for entering into compromise proposals involving sacrifice / waiver, factors to be taken into account before considering waivers, decision levels, reporting to higher authorities and monitoring of write-off / waiver cases. The policy framed by the bank should be placed before its Board for its approval. Proper monitoring of the policy at periodical intervals is equally necessary. Special Recovery Cells may be set up at regional / zonal levels. similarly, Recovery Officers may be appointed at branches having sizeable NPAs and their recovery progress may be monitored on monthly basis. The following techniques may be used by banks for reducing their NPAs.

I. Rephasement of Loans

Repayment of a term loan depends on income generating capacity of the borrowing concern. It may be difficult to get repayment of the term loan if the borrowing unit does not generate profit. A unit which does not earn profit may repay a few instalments by borrowing from other sources or diverting short term funds for repayment. But ultimately a unit not earning profit will not be able to repay the term loan. Therefore, it is necessary to fix repayment schedule for a term loan according to income generating capacity of the unit. If repayment schedule is not fixed properly or a unit is not able to generate expected profit, possibility may be explored in consultation with the borrowers, for rephasement of the loan instalments. Banks are not permitted to upgrade the classification of any advance in respect of which terms have been renegotiated unless the package of renegotiated terms has worked satisfactorily for a period of two years. The classification of the asset may improve, if performance of the loan account remains satisfactory for two years after rephasement. It may be mentioned

that rephasement of the loan instalments should be done only when it is expected to get payment after the rephasement.

II. Rehabilitation of Potentialy Viable Units

If a sick unit is potentialy viable, necessary efforts should be made to finalise the rehabilitation package withut loss of time. Provisions need not to be made for a period of one year from the date of the disbursement in respect of additional facilities sanctioned under rehabilitation packages approved by BIFR/term lending institutions. If the rehabilitation programme runs smoothly, it may not be necessay to make provisions even after one year for additional facilities provided statutory auditors are also satisfied about the progress of rehabilitation programme. If the unit becomes viable, the entire outstanding (including existing facilities) will become standard assets. Although rehabilitation of sick units is a long- drawn procedure, it may be encouraged where units are potentially viable and the management is reliable. However, non-viable sick units should be liquidated to get funds for recycling without avoidable los of time in decision taking.

III. Acquisition of Sick Units by Healthy Units

If a sick unit is acquired by a healthy unit. the outstanding loan amount of sick unit may be transferred to the healthy unit and the entire NPA may be even wiped off. Therefore, banks should encourage mergers/acquisition of sick units wherver they feel it may reduce the NPAs. Banks may even help the sick units to get suitable buyers, if a part of the consideration to be received by the sick unit is liekly to be used for liquidating the NPA. Banks should make a comparative study of gains of merger/ acquisition and the sacrifice to be made by them to clinch the deal.

IV. Compromise with Borrowers

A compromise may be called a negotiated settlement in which the borower agrees to pay a certain amount to the banker after getting certain concessions. A large number of compromise proposals are being approved by banks with a ve\iew to reducing the NPAs and recycling the funds instead of resorting to expensive recovery proceedings spread over a long period. However, compromise proposals should not be approved

without proper scrutiny. Banks should try to recover their dues to the maximum extent posible at minimum expenses. While entering into the compromise proposals,following points should be taken into consideration:

(i) Compromise proposals should be accepted by a bank keeping in view the guidelines given in its Loan Recovery Policy.

(ii) A proper distiniction should be made between wilful defaulters and the borrowers defaulting in repayments due to circumstances beyond their control. Normally, compromise proposals should be accepted from non-wilful defaulters only. If any compromise is done with a wilful defaulter, compelling reasons for resorting to the same should be spelt out in the note/memorandum prepared for its approval.

(iii) Where security is available, its realisable value should be assessed taking into consideration its location, present condition, marketable title and possession.

(iv) Worth of the guarantor, if any, should be assessed. Many a time banks may be able to recover the amount with the help of the guarantee available.

(v) Borrower's credibility and his paying ability should be assessed if recovery is to be made in instalments as per the compromise proposal.

(vi) Staff accountability should be examined expeditiously and completed within a time-frame.

(vii) All compromise proposals approved by any functionary should be promptly reported to the next higher authority for post-facto scrutiny.

(viii)The proposal for write-off/compromisefalling within the authority of Executive Director/Chairman and Managing Director/Management Committee/Board of the bank should be first processed by a committee of senior executives of the bank (i.e. Chief General Manager, General Managesr).

(ix) Internal inspectors of the banks and Statutory Auditors should also examine the compromise proposals to ascertain that they have been done in the interest of the bank.

(x) While conducting inspection of banks, officials of the Reserve Bank should also examine all the compromise proposals involving high sacrifice. They may also scrutinise such proposals where the amount of loss suffered by banks as percentage to the total outstandings is very high.

V. Calling up the advances and filing of civil suits

If it is not possible to revive a unit or enter into a reasonable settlement with the borrower, it is better to recall the advance at an early stage instead of waiting for a long time which may result in deterioration of the security available. Further, if it is not posible to sell the security without obtaining court's order, civil suits may be filed against such borrowers who are not likely to come to a reasonable settlement. Banks should not feel that their job is over by filing civil suits. If a reasonable settlement is possible even after filing the court case, compromise may be done with the knowledge of the court. Proper follow-up of the court cases is essential. Banks should revise the list of apporved Advocates from time to time keeping in view their performance. Advocates who do not perform well should not be given new cases.

VI. Approaching debt recovery tribunal

An Act has been Passed by the Parliament for setting up Debt Recovery Tribunals for expeditious adjudication and recovery of debts due to banks and financial institutions. The provisions of this act titled as "The Recovery of Debts due to Banks and Financial Institutions Act, 1993", are applicable where the amount of debt due to any bank or financial institution or to a consortium of banks or financial institutions is not less than Rs.10 lakhs. The Central Government have, however, been empowered to reduce the lower limit of Rs.10 lakhs but not below Rs.1.00 lakh by issuing a Notification.

The "Debt Recovery Tribunals " are being set up in various States and an Appellate Tribunal has also been set up at Bombay to hear the appeals against the decisions of the Debt Recovery Tribunals. However, a provision has been made in the Act to deposit 75 percent of the decretal amount before going for appeal which may discourage unnecessary delay in settlement of cases. It is hoped that establishment of Debt Recovery Tribunals may not only facilitate quick decisions but also induce borrowers to enter into settlements with banks.

VII. Settlement of claims with DICGC/ECGC

If DICGC/ECGC claims are available, banks should submit their proposals for the same with necessary details. Proper follow-up with DICGC/ECGC is necessary for settlement of claims and reducing the NPAs to certain extent.

VIII. Establishment of Asset Recovery Branches

Some banks have opened Asset Recovery Branches at Critical centres for undertaking recovery. Bad and doubtful debts of various existing branches have been transferred to Recovery Branch which may have expert trained staff with necessary background for recovery. The specialised Recovery Branches may give undivided attention to recovery of dues. Establishment of such specialised branches may help in reducing NPAs.

IX. Write - off the Outstandings

If all the efforts for recovery fail, banks may to write - off the advances. Such write-off should be done after exhausting all other remedies. When chances of recovery are negligible, some banks prefer to write-off an advance to reduce its income and save tax. In such cases, banks should continue to make efforts for recovery even after writing-off the advance.

6. Conclusion

It may be observed from the above that various techniques can be used for reducing NPAs. If one technique fails while dealing with a particular NPA, banks may have to try with other techniques for that case. In addition to solving the problem of existing NPAs, quality of appraisal, supervision and follow-up should be improved for present advances to avoid future NPAs.

Review Questions:

1. Improving the quality of appraisal, supervision and follow up is the only way out for banks to reduce NPAs - Explain.

2. Suggest few tips for improving recovery.

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LESSON 18

INDUSTRIAL SICKNESS

The impact of industrial sickness on national economy is far-reaching. It leads to under-utilisation of capital assets, decline in morale of the investors, unemployment, decline in profitability of banks, non-availability of funds with banks for recycling due to blocking in sick units and decline in production. Therefore, it is necessary to attach high importance to prevention of sickness and rehabilitation of sick units. Potentially viable sick units should be revived and non-viable sick units should be liquidated to get funds for recycling without avoidable loss of time in decision - taking.

Definition of Sick Units

All the sick units may be grouped under the following heads:-

(i) Non-SSI Sick units i.e. Sick Industrial companies falling within the ambit of Sick Industrial Companies (Special Provisions) Act, 1985 (SICA)

(ii) Non-SSI Weak units

(iii) Sick SSI units.

I. Non-SSi Sick Unit i.e. Sick Industrial Companies covered under SICA

In order to deal with the problems of sick industrial companies, Sick Industrial Companies (Special Provisions) Act, 1985 was enacted. In the light of the experience gained, the above Act was amended in certain respects by Sick Industial companies (Special Provisions) Amendment Act, 1993 which had received the assent of the president on 1st February, 1994. As per Section 3(1) of the amended Act "Sick Industrial Company means an industrial company (being a company registered for not less than five years) which has at the end of any financial year accumulated losses equal to or exceeding its entire net worth." It may be clarified that an industrial company existing

immediately before the commencement of the Sick Industrial Companies (Special Provisions) Amendment Act, 1993, registered for not less than five years and having at the end of any financial year accumulated losses equal to or exceeding its entire net worth, shall be deemed to be a sick industrial company. The amended act has also defined potentially sick industrial company. As per Section 23(1) of the amended Act, an industrial company may be considered as potentially sick industrial company if its accumulated losses at the end of any financial year have resulted in the erosion of fifty per cent or more of its peak net worth during the immediately preceding four financial years.

It may be mentioned that for the purpose of the above definitions, 'net worth' means total of the paid-up capital and free reserves. 'Free reserves' means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of assets, write back of depreciation and amalgamation.

The following aspects should be considered while classifying a company as sick industrial company for the purpose of the Act:-

(i) Small scale/Ancillary units are outside the purview of the Act.

(ii) A company registered under the Companies Act, 1956 either as a Private Limited Company or as a public Limited Company comes under the purview of the Act whereas partnership firms and proprietorship concerns are outside its purview.

(iii) A five-year span should have elapsed from the date of the company's incorporation to the latest financial year end.

(iv) The company should have carried on manufacturing / production activities of any of the items listed in the first schedule to the Industries (Development and Regulation) Act, 1951, in one or more of its factories. However, it should not be an industry relating to 'ships and other power-drawn vessels.'

(v) Where a receiver or an Official Liquidator has been appointed in any proceedings pending immediately before the commencement of the Act in any High Court for winding up of the company , such companies are outside the purview of the Act.

(vi) It may be mentioned that Govt. companies having State or Central Govt. share - holdings of 51 percent or more were outside the purview of the Act in the beginning. However, they have been brought within the purview of the Act by an amendment afterwards.

Sick Industrial companies covered by the definitions have to be dealt with as per the provisions of the Act. Banks should review all cases of sick industrial companies and potentially sick industrial companies financed by them to ascertain which of them falls within the above mentioned revised definitions of a sick industrial company or a potentially sick industrial company and take necessary action in accordance with the relevant provisions of the Act. It may be mentioned that under the provisions of Section 23A(1) of the amended Act, a public financial institution or a scheduled bank may also report the cases of potentially sick industrial companies to the Board for Industrial and Financial Reconstruction (BIFR)

II. Non-SSI Weak Units

It may be observed from the above definition that Act does not cover all the units having sickness. It does not cover partnership firms and proprietory concerns. In order to facilitate remedial action by banks at an early stage for such units which are not covered by the Act, the Reserve Bank decided to adopt a definition of 'Weak' units. An industrial unit is defined as a 'Weak' unit if its accumulated lossed as at the end of any accounting year, resulted in the erosion of fifty percent or more of its peak net worth in the immediately preceding four accounting years . If the matter relating to a 'Weak' industrial company is refered to BIFR in terms of section 23A(1) of the amended Act as mentioned earlier, it should be termed as a potentially sick company.

It may be clarified that weak units include all categories of borrowers i,e. limited companies, partnership firms, proprietory concerns,etc. It may be further clarified that this clasificatins into sickindustrial company and weak units will not apply to SSI units

III. Sick Sall Scale Industrial Units

Although sickness in thelarge, medium and small scale industrial units have many common features, the problems of small scale industries have to be dealt with

keeping in view the relative weakness of small scale and tiny sector. Therefore, a separate definition has been given by the Reserve Bank for sick units falling in small scale and tiny sector. A small scale industrial unit may be classified as sick when (i) any of its borrowal acounts hasbecome a 'doubtful' advance, ie. prinicpal or iterest in repect of any of its borrowal accounts has remained over due for a period exceeding 2 1/2 years, and (ii) there is erosion in the net worth due to accumulated cash losses to the extent of 50 percent or more of its peak net worth during the preceding two accounting years. In the cases of the tiny/decentralised sector also, a unit may be conisdered as sick if it satisfies the above defintion. However in the case of such units. if it is difficult to get financial particulars, a unit may be considered as sick if it defaults continuously for a period of one year, in the payment of iterest or instalments of principal and there are persistent irregularities in the operatin of its credit limit with the bank.

Proces of Sickness

Sickness is a phenomenon which does not erupt all of sudden but it is a gradual process of erosion of some of its functional areas. Every loan account is assumed to be regular at the time of disburesement at least from going concern approach. However, in course of time due to various reasons abnormality may develop in any of the functional areas like production. finance, marketing, managment etc. As a result of the above,some defects may be observed in the normal functioning of the unit. These are known as 'warning signals'.

Warning Siganals

When a unit is moving towards sickness, several adverse features may develop in the normal functioning of the unit, which are sometimes also latent at the initial state . An exerienced banker can sometimes draw conclusions even on the basis of the ledger position of the loan account.

Let us assume, the position of loan account of an industrial unit is as under:

(Rs. in lacs)

Limit sanctioned		Value of Security		Drawing Power		Balance Outstanding	
Nature	Amount	Dec. 95	Dec. 96	Dec. 95	Dec. 96	Dec. 95	Dec. 96
OD	10	18	18	10	10	10	10

Apparently, the unit does not show any sign of irregularity. But, now let us take the composition of stock-statement of security worth Rs. 18 lacs on both the above dates:

	Dec.	Dec.'96
Raw materials	8.00	4.00
Stock-in-progress	4.00	6.00
Finished goods	5.50	7.00
Spares	0.50	1.00
	18.00	18.00

This shows the movement of stock is as under:

Raw materials	....	decreasing
Stock-in-progress	....	increasing
Finsihed goods	....	increasing
Spares	....	increasing

This is not a very healthy feature. On the basis of the statistical experience, it has been observed that whenever a unit develops sickness, or there are some problems in production/sale, the movement of the stocks will be as above. As such, the banker should immediately be put on guard. This type of inference can be drawn merely on the basis of the comparative position of a loan account available in the bank records without any cooperation from the borrower.

In general, the warning signals from a unit tending towards sickness can be as follows:

1. Opertational :

- Operations of the account are not healthy. Sale proceeds are not deposited regularly. There are no fluctuations in the account. The account generally remains dormant or even overdrawn due to the non-payment of interest.

- Borrower is not prompt in submission of stock statement. Even if the same is submitted, the stocks are generally overvalued for getting more finance from the bank.

- Borrower is not cooperating with the bank and does not submit the financial information or regularise the account.

- There is very often request from the borrower for sanction of temporary limits or enhancement of limits. It shows that the borrower is facing some financial difficulty.

Borrower is not prompt in making payment of interest charged in the loan account. He also does not make payment of term loan instalment in time.

-Borrower is not in a position to meet obligations of statutory liabilites like P.F., Gratuity , Bonus and even wages and salaries to workers.

- Operation in the bills (receivables) aoount of the borrower are highly unsatisfactory.

Several unhealthy features have developed like:

(a) Over detention
(b) Large number of frequent returnings
(c) Drawings of accommodation Bills
(d) Drawing of bills on self/allied or associate firms/sister concerns etc.

2. Finanical:

The financial position of the borrower gets continuosuly deteriorated. It is manifested in many ways as under:

-Gradual reduction in production, sales and profitability.

- Gradual increase in sundry debtors

- Corresponding rise in sundry creditors

Net working capital (NWC) slowly falls down and ultimately becomes negative.

- Erosion in net worth due to continuous incurrence or losses.

- Initiation of legal proceedings by creditors etc.

3. Organisational Set-up:

- Worsening position of industrial relations as the management is not in a position to meet the demands of the workers.

- High employee turnover thereby number of skilled persons starts leaving the unit.

- Major change in the share holdings

- Professional executives leave the organisation.

Causes of Sickness

Some units may be born sick owing to defective appraisal leading to wrong projections of viability or certain problems faced during project implementation itself. Some units may become sick due to management deficiencies and causes internal to

em. Sickness may be thrust upon some units due to causes external to them. Thus he causes of sickness can be broadly divided into two categories-Internal and External ternal causes are those causes which can be controlled or avoided by the managemen f the unit. External causes are those causes on which the management of the unit ha o control and they are due to external factors. It is very difficult to make watertigh ompartments between internal and external causes because sometimes managemen ay be able to reduce adverse impact of extrnal factors by proper planning and taking orrective steps at appropriate time. A unit may become sick due to internal/exernal factors relating to the problems of project implementation, production, marketing, finance and administrative mangement which are summaried below:-

		Internal Factors		**External Factor**
1. Project Planning				
	(i)	Inadquate technical know-how	(i)	Locational disadvantage
	(ii)	Outdated Production process	(ii)	Defective viability study done by financial institutions
	(iii)	Uneconomic size of project	(iii)	Sanction of licences and financial assistnace to many units leading to establishment of more units than required.
	(iv)	Under-estimation of financial requirements		
	(v)	Unduly large investment in fixed assets		
	(vi)	Over estimation of demand		
	(vii)	Break-even point too high		

	Project Implementation	(i) Delay in implementation of project	(i) Non- availability of land at the selected site
		(ii) Delay in placing orders for machines	(ii) Non- availability / difficulty in procuring construction materials like cement,steel etc.
		(iii) Inability of the promoters to bring in funds to the extent proposed	(iii) Delay in delivery of machines.
		(iv) Dealy in tying-up-financial arrangements	(iv)Delay in disbursement of assistance
		(v) Change in certain project concepts	(v) Delay in observing formalities relating to issue of shares.
		(vi) Siphoning of funds by the promoters	(vi) Increase in project cost under different heads due to price escalation, under estimation of cost etc.
			(vii) Delay in getting power connections, water connections, permission ofconcerned authorities to discharge effluents etc.
		Internal Factors	External Factors
3.	Production	(i) Inappropriate product mix	(i) Non-availability of raw materials or increase in the priceof raw materials without a corresponding increase in sale price of the product (s)

		(ii) Poor quality control	(ii) Non-availability of important infrastructure facilities like power, water, transport etc.
		(iii) Low utilisation of capacity	(iii)Unsatisfactory performance of certain machines resulting in low production, high rejection, rate etc.
		(iv) High cost of production	(iv) Obsolescence of the manufacturing process following technological developments.
		(v) Poor inventory	
		(vi) Inadequate maintenance of plant and machinery	
		(vii) Lack of timely and adequqte modernisation	
		(viii)Lack of co-ordination between marketing and production planning	
4.	Marketing	(i) Dependence on a single customer/single product	(i) Introduction of better substitutes
		(ii) Lack of proper costing and pricing system	(ii) Entry of many new manufacturers leading to cut -throat competition.
		(iii) Inadequate efforts for sales promotion	(iii) Market recession

		(iv) Improper marketing and distribution systems.	**(iv) Obsolescence of the product following technological developments**
		(v) Non-compliance with the delivery schedules causing annoyance to some buyers who may ultimately shift to another suupplier for their requirements	
		(vi)Booking large orders without escalation clauses. although long time is required to execute them.	
		(vii)Lack of market feedback and market research.	
5.	Finance	(i) Low contribution from promoters (ii)High debt-equity ratio leadings to interest burden (iii)Lack of proper follow-up action for realisation of debts (iv) Lack of proper planning to pay the creditors (v) Diversion of working capital funds for acquisition fixed up asset (vi)Investments in sister cncerns (vii) Liberal dividend policy (viii) Over-trading	(i) Non-availability of adequate finance (ii)Credit restrictions

6.	Administration and personnel	(i) Dissention within the management	(i) Non-availability of skilled man power
		(ii) Absense of manpower planning	(ii) General labour unrest in the region
		(iii)Poor industrial relations	(iii) Sympathetic trikes
		(iv) Over centralisation	(iv) Multiplicity of labour unions
		(v) Lack of feed-back to management (Management information System)	(v) Failing health/death of key person in the unit.
		(vi) Lack of co-ordination and control	
		(vii) Incompetent mangement	
		(viii) Dishonest management	
7.	others	(i) Undue importance given to one or two activities of the business and the neglect of others. Many units promoted by technical entrepreneurs have become sick because the entrepreneurs have given high	(i) Natural calamities

(ii) Loyalties to other concerns. In some cases, companies are making purchases/ sales from/To other units in which promoters have higher interest. Sometimes, they sacrifice the interest of one unit to give advantage to other units.	(ii) Political (domestic as well as international)
	(iii) Change in government policies regarding.
priority to production and neglected marketing/finance.	price of raw materials fiscal duties, prices of finished products, restrictions on exports imports withdrawal of tax concesions etc.

The above causes of sickness are inter related. A unit may start incurring cash losses owing to one or more of the above causes.

Review Questions:

1. Define a sick unit.

2. That are the warning of sickness?

3. Elaborate the causes of industrial sickness.

LESSON 19

REHABILITATION OF SICK UNITS

Rehabilitation means taking suitable measures to bring a sick unit back to health/ sound footings. The best time for corrective action is when the sickness is at the incipient stage. Thus identification of sickness and knowledge of real cause for the same are pre-requisites before taking any action. The next step is to conduct the detailed techno-economic viabilitiy study to establish viability of the unit. Generally the viability study of a sick unit is undertaken by the bank by its own technical staff. The help of small industries service institute (SISI) or Technical Consultancy Organisations (TCO) can also be taken. The basic point that should emerge out of the study is that the unit is potentially viable.

If a unit becomes sick, financial institution/banks may have to examine whether it can be revived. Efforts should be made to revive only those sick units which have chances of becoming viable. In case of MEDIUM and LARGE industries a unit may be regarded as viable if after implementing a relief package spread over a period not exceeding seven years from the commencement of the package, it would be in a position to meet its repayment obligations as agreed upon including those forming part of the package without the help of the concessions after the above-mentioned period. The repayment period for the restructured debts should not exceed ten years from the date of implementation of the package.

In the case of small scale industries, a unit may be regarded as viable if after implementing a relief package spread over a period not exceeding five years from the commencement of the package, it would be in a position to meet its repayment obligations as agreed upon including those forming part of the package without the help of the concessions after the above mentioned period. The repayment period for restructured debts should not exceed seven years from the date of implementation of the package. In the case of tiny/decentralised sector units, the period of reliefs/ concessions and repayment period of restructured debts should not exceed two years and three years respectively.

In order to ascertain the viabiity of a unit, detailed technical, commercial, financial and management apraisal should be done and estimate should be prepared to find out, whether sufficient profit will be generated to satisfy the criteria fixed for viability.

TECHNICAL APPRAISAL

(i) Asscertain whether there have been any changes in the manufacturing process being used by the unit. If a new process has been developed which is more economical, make cost-benefit analysis of the new process.

(ii)Estimate the production capacity of the various sections of the the plant and examine whether it is worthwhile to increase the capacity in any particualr section without involving large investment.

(iii) Examine whether there is any need to change the product mix and if so what wil be the cost of additional equipments required for changing the product mix.

(iv) Study the present plant layout to ascertain whether it needs any changes to save time for handling material and equipments.

(v) Examine whether any major repair / replacement / balance in equipment is required and also indicate the finance required for that.

(vi) Studty sources and availability of essential, inputs like raw material, water, power, fuel etc., and indicate necessary steps for their procurement.

(vii) Examine whether it is worhtwhile to change the location of the plant. Changing should only be suggested when it is practicable.

COMMERCIAL APPRAISAL

(i) Examine the present marketing strategy adopted by the unit and suggest necessary changes in its pricing policy, packing, transportation, distribution channels, advertising and sales promotion techniques.

(ii) Find out whether changing the product mix is necessary to suit the marketing requirements. Profit margin on different items of production may ascertained and product mix may be changed to maximise the profit keeping in view the demand for various products.

FINANCIAL APPRIASAL

(i) Ascertain present financial position of the unit after determining the realisable value of assets.

(ii) Examine current liabilities to indicate pressing creditors and find out the immediate requirments.

(iii) Carry out a detailed analysis of current assets.Examine stock of raw materials and finished goods to ascertain whether any item has become obsolete and is not showing any movement.Similarly age of debts may be ascertained to find out whether any debts are outstanding for a long time and if so steps taken by the unit to realise them may be ascertained.

(iv) Ascertain total cost of the fixed assets required for the repair/modernisation/ expansion/diversification programme suggested under technical appraisal.

(v) Estimate total working capital requirements to caryy out the production at expected level of capacity utilisation.

(vi) Indicate the sources of funds for meeting the above requirements of fixed assets working capital and repayment of pressing creditors. Total requirements of funds should be matched with the source of finance. Promoters may be asked to indicate the sources of funds to be provided by them. If any asset is not useful for the unit, it may be sold and the amount realised on sale of such asset may be used for rehabilitation programmes. After ascertaining total reuirements of funds and other sources of finance available the amount of additional working capital and term loan to be provided by banks and financial institutitons should be decided in such a way that total requirements of funds may match with the sources of finance.

(vii) If any scheme for amalgamation or merger is proposed, its feasibility should be studied.

(viii) After ascertaining the real value of assets, find out the extent to which present advances are secured. The postion of security after providing addititonal funds and creating addititonal assets may also be ascertained. However, security alone should not be the criterion for financing the rehabilitation programme. It should be decided on the basis of viability of the programme.

(ix) Draw the repayment schedule for existing loans and additional term loans keeping in view the future cash generation of the units.

MANAGEMENT APPRAISAL

(i) Suggest necessary changes in the present organisational set-up of the unit.

(ii) If integrity of the management is doubtful it is necessary to change the management or at least appoint a suitable officer in the unit as representative of banks and financial institutions to monitor expenditure.

(iii) If it is felt that an incompetent person is occupying a very high position. it is better to change him and appoint a competenet person in consultation with banksand financial institutions.

(iv) If a unit is having excess staff or labour, provision should be made in consultation with their association/union to reduce the number. Provision may also have to be made for the payment of compensation, if retrenchament is necessary.

(v) Review the existing system of maintaining of books of accounts and other records and suggest necessary changes. Have an effective management information system to monitor the implementation of the rehabilitation programme.

RBI GUIDELINESS ON REHABILITATION OF SICK UNITS

ESISTING CASH LOSSES

(i) Funded interest term-loan (FITL):

The amounts of interest already debited to the cash credit and term-loan accounts but not recovered may be funded. This should be repayable within 3 to 6 years and interest to be charged on the same should be minimum 10% per annum and its repayments should have precedence over other dues. As this is a clean loan maximum premissible repayment is 7 years.

(ii) Working capital term-loan:

The irregular portion of the working capital loan excluding interests should be funded separately. This should also have a definite repayment schedule of not more than 7 years.

(iii) Penal Interest:

Penal interest already charged in the acccount may be waived.

ADDITIONAL FINANCIAL ASSISTANCE

(i) Working Capital : Need based further working capital finance can be provided by the banks.

(ii) Promoters Contribution: The minimum promoter's contribution should be (a) 15% in case of change in management or professional management (b) 20% in other cases. However, a relaxation has been given that out of the above minimum quantum, at least 10% is to be brought immediately and balance amount (5% or 10% as the case may be) within a maximum period of 6 months.

SHARING BETWEEN BANKS AND FINANCIAL INSTITUTIONS

(i) The requirements to meet a part of sundry creditors, statutory liabilities, salaries and wages of workers etc are to be shared between the banks and financial institutions on equal basis.

(ii) The start-up expenses, a part of the future cash-losses and margin for future working capital should be provided by the financial institutions. However, if such institutions are not involved in the project, the amount should be borne by IRBI.

RIGHT OF RECOMPENSATION

In the loan agreement to be executed by a borrower at the time of rehabilitation a clause must be added that the bank has a right of compensation after the unit has started to earn profit.

Similar concessions with much liberalised terms can be offered to sick units in small scale sector. An additional relief by way of contingency loan assistance upto 15% of cost of rehabilitation can also be sanctioned to such units. The interest on this loan will be the same as charged on working capital advances.

Sacrifices to be made by others

Besides the sacrifices to be undertaken by the bank, it is necessary for revival of a sick unit that certain reliefs and concessions are also granted by various agencies involved in the process. This is very important as the unit will never be in a position to come to health if some reliefs/concessions are not granted at the operational level. The sacrifices required to be made by the various agencies can be summed up as under:

1. Management

(a) Bringing in further funds/capital.
(b) Write-off of loan.
(c) Reduction in remuneration.

(d) Agreeing to provide further security and personal guarantee.

(e) Agreeing to appoint financial controllers/internal auditors/directors of banks/ Financial Institutions on boards.

(f) Reconstitution of management by bringing in professionals.

2. State Government

(a) Preferential treatment to the unit in the matter of supply of raw material quota, power connection, availability of all other critical inputs and above all an assured market.

(b) Providing sales tax loan either at nil or very nominal interest rate.

(c) Taking expeditious steps to solve the industrial relation problems.

(d) Providing concessions in the rates of sales-tax, octroi duty, and other levies.

(e) Considering giving government guarantee in respect of fresh advances.

(f) Rescheduling of power-dues on a pragmatic basis considering the internal generation of surplus.

(g) Providing adequate financial support by way of equity participation to the units which have been taken over by the state under IDR Act through budgetary provisions or support from SIDCs/SIICs.

(h) Waivement of penal levies.

3. Central Government

(a) Price-preference and reservation of quota for purchase by government/semi government organisations.

(b) Deferment of PF and waiver of penalties, income tax and ESI dues, partial or full exemption from Central Excise.

(c) Preferential allotment of canalised items for the purpose of import of raw materials.

(d) Providing interest-free loans on equity participation especially in respect of those industries survival of which is in the national interest.

4. Labour Force:

(a) Agreeing for increasing productivity.

(b) Wage freezing or estabilisation and sometimes agreeing for wage reduction also.

(c) Deferring of payment of terminal benefits.

(d) Voluntary agreement for schemes of rationalisation/ retrenchement of surplus unproductive staff.

MONITORING OF NURSING PROGRAMME

Close monitoring of the rehabilitation programme is necessary for its success. Monthly reports should be called for from the unit regarding the progress of the rehabilitation programme. It may be ensured that additional funds provided to the unit are used according to the rehabilitation programme. Necessary steps should be taken to ensure that the unit is rehabilitated according to the programme envisaged.

Review Questions

1. What do you mean by techno economic viability study?
2. What is EITL?
3. Explain the various steps involved in the rehabilitation of sick units.

LESSON 20

REHABILITATION OF SICK INDUSTRIAL UNITS - ROLE OF BIFR

The Reserve Bank had set up a study group populary known as Tiwari Committee to analyse the problems of sick units and explore their remedies. The committee strongly felt that one of the limiting factors in revival efforts had been that there was no statutory force or legal teeth with which the rehabilitation package could be drawn up and enforced. Further, there was no single forum which could organise all those whose participation was necessary in any revial exercise, viz., banks, financial institutions, creditors, labour, Central Government, State Governments and statutory authorities and put a stamp of legal sanction to the accepted revival scheme. The multiplicity of laws like MRTP Act, Income Tax Act, Labour Laws, Factories Act, Companies Act, etc., made merger/amalgamations, sale/lease of assets of the undertakings and financial reconstruction of the companies quite cumbersome. In this background, a bill was introduced on August 29, 1985 in the parliament to pave the way for speedy decisions and their expeditious implementation regarding sick industrial companies. The Bill was enacted by the Central Government and became a Law on January 8,1986 and was published in the extraordinary Gazette of January 9, 1986. However, all the provisions of this Act came into force with effect from May 15, 1987. This Act is called 'Sick Industrial Companies (Special Provisions) Act, 1985 and the body of experts which is vested with the bonus of enforcement of the provisions of the Act is called 'Board for Industrial and Financial Reconstruction (BIFR)'. It has wide-ranging powers with regard to sick industrial companies and the schemes of rehabilitation as sanctioned under its orders shall be binding on all concerned. All the proceedings before the BIFR are deemed to be judicial proceedings. No other Civil Court has the jurisdication on matters on which BIFR is empowered to decide and no injunction can be brought in against any such matter pending before it.

It may be clarified that the BIFR is neither a bank nor a financial institution. It does not extend any financial assistance to any company. In brief, its primary functions are directed towards getting viability studies of sick units prepared and authenticating the revial schemes for viable sick units. The procedure followed by the BIFR can be summarised as under:

I. Obligations of Sick Industrial Company/Fianancing Bank

When a company becomes a " Sick Industrial company " according to the definition given in the Act, within 60 days of the finalisation of the duly audited financial statements as at the end of which it had become a sick industrial company, the Board of Directors of the company is bound to make a reference to the BIFR for determination of the measures that are to be adopted with reference to the company. Such report should be sent in Form `A' (From `AA' for Govt. Companies) as specified for this purpose neatly typed on one side of the paper in Hindi or English. The form A' should be accompanied by five additional copies alongwith four copies of all the enclosures.

Notwithstanding a reference by the company, the sole bank/ lead bank in consortium/ major bank in the multiple financing system may also make a reference in Form 'B' (Form'BB' for Govt. Companies) as specified for this purpose. Other procedures are similiar tc the submisson of Form'A'/'AA. However,in their reference, banks should indicate the account in relation to the following four categories:

i) Where viability study is yet to be taken up

ii) Where viability study has been completed and rehabilitation package is being drawn up

iii) Where a rehabilitation programme is approved by the financial institutions/ banks/RBI

iv) Where revival efforts have failed and the unit is not cosidered vabile/is closed and there are no operations.

In case a suit has been filed or any other legal steps have been inititated in any of the above cases, the same should be indicated clearly.

After scrutinising the references received, BIFR would call upon the informant to rectify the defects, if any, within a specified time. If on the scrutiny, the reference is found to be in order, it would be registered. The cases where packages are being considered or being implemented will be given priority in hearings as compared to closed units. Copies of all reports sent by banks to the BIFR should invariably be sent to the Reserve Bank for information and record.

II. Enquiry by BIFR

After registration of reference, the BIFR would decide the date for hearing the case and issue notices to the company, concerned banks, financial institutitons and other concerned parties calling upon them to depute senior officials conversant with the case and who can speak on behalf of their respective organisations. In the first hearing, the BIFR would decide:

i) Whether the subject company is a 'sick industrial company' within the meaning of Sick Industrial Companies (Special Provisions) Act.
ii) Whether it can make its net worth exceed the accumulated losses within a reasonable period.
iii) Whether it is prima-facie viable and a 'scheme' for revival need be prepared.

If during the first hearing, the BIFR comes to the conclusion that the subject company is not a 'sick industrial company' and therefore dismisses the case, banks/ institutions may take their own decision for revival of the unit as if the Act is not in force, or even proceed with recovery steps, if they so desire.

If the BIFR is convinced that the unit's viability has been estabilished and rehabilitation package has been sanctioned by banks/institutions and that there are prospects of early revival, it may give reasonable time to the company to make its net worth exceed the accumulated loses.

If the BIFR comes to the conclusion that it is not possible for the company to make its net worth exceed the accumulated losses within a reasonable time , it would order for viability study of the unit to be carried out and a scheme for revival or otherwise prepared. Such viability study/scheme preparation will be entrusted by the BIFR to an all India financial institution or a state level institution or a scheduled bank or a consultant. The institution / bank so appointed by the BIFR is called the Operating Agency.

After making enquiry and hearing all concerned, if the BIFR forms an opinion that the company should be wound up, it generally gives one month's time to show cause as to why it should not be wound up. If no such grounds are adduced, it would forward the opinion to the High Court and the High Court shall order for winding up of the company and proceed as per the provisions of the Companies Act.

III. Formulation of the schemes

A Scheme for the rehabilitation of a sick industrial company should be prepared and submitted to the BIFR by the specified operating agency ordinarily within 90 days. The scheme to be prepared by the operating agency may provide one or more of the following measures:-

(i) Financial reconstruction of the sick company
(ii) Take over of the management
(iii) Amalgamation of sick company with other company or of any other company with the sick company .
(iv) Sale or lease of the sick company
(v) Rationalisation of managerial personnel, supervisory staff and workmen in accordance with the law.

The operating agency should prepare the scheme in consultation with the other financing banks/institutions and they should extend utmost co-operation and assistance to the operating agency. In order to enable the operating agency to complete the assignment within the stipulated period, the following time schedule should be adhered to :-

(i) The operating agency should advise the other banks/financial institutions about the fact of its appointment within 7 days of receiving the order from BIFR. The operating agency should also indicate the information required by it regarding the unit's financial position, status of the borrowal accounts and non-fund based facilities, nature of irregualrities, quality of management.

(ii) The banks/financial institutions should furnish the details called for within 10 days from the date of the communication.

(iii) Within 5 weeks of its appointment, the operating agency should convene a joint meeting of all banks/financial institutions. In this meeting a tentative scheme should be prepared keeping in view the concept of viability and the parameters for the grant of reliefs/concessions. The package should also include sacrifices from all other agencies involved in the revival of the unit, viz., promoters, Central and State Governments, creditors, labour, etc. If any bank/financial institution is of the opinion that the concerned industrial company is not viable and a rehabilitation scheme cannot be prepared within reasonable limits of concessions/reliefs, it should convey its reservations to the operating agency when the tentative scheme is prepared.

(iv) Within 30 days (but not more than 45 days in any case) from the date of the first joint meeting, a second joint meeting should be held. In addition to the others, a representative of Reserve Bank should also be invited to participate in this meeting. The officers of banks/financial institutions should attend this meeting with necessary delegation of powers to give a firm commitment. In case where consultation with Reserve Bank is considered necessary, it should be done well in advance before the meeting. The tentative scheme drawn up in the first meeting should be given a final shape and approved in this second meeting.

It may be noted that there is no compulsion on the part of the operating agency to prepare a revival scheme. If a unit is not considered viable, the operating agency is free to say so in its report to the BIFR.

IV. Sanction and implementation of the scheme

The scheme prepared by the operating agency is examined by the BIFR which can make modification in it, if considered necessary. The BIFR should circulate the

scheme to all the banks and financing institutions which are required to provide financial assistance to accord their consent within 60 days from the date of circulation. The Board may allow further period of maximum 60 days to the concerned parties to accord their consent. If no consent is received within 60 days or such further period as has been allowed by the Board, the consent of such parties shall be deemed to have been given. As the banks and financial institutions are involved in the preparation of the scheme and an opportunity is given to them by the operating agency in the first and second joint meetings, generally they are expected to give their consent to the scheme. Further, it may be noted that the BIFR is empowered to adopt other measures, including the winding up of the company, in case the required consent to provide financial assistance under the scheme is not given. Hence, banks should carefully weigh the alternatives and proceed with extreme caution while deciding to withhold the consent. If banks decide to withhold such consent to extend financial assistance expected of them under the scheme due to some special reasons, they should immediately inform the Reserve Bank of their intention to withhold the consent with justifying reasons before communicating the same to the BIFR. Liquidity constraint is not an acceptable reason for withholding such consent. On receipt of the consent from all the parties to provide financial assistance, the BIFR may sanction the scheme. As mentioned earlier, if no objection is received within stipulated period mentioned above, it is deemed to have received the consent. After sanction of the scheme by the BIFR, it shall be binding on all concerned.

Banks and financial institutions which are required to provide financial assistance should designate by mutual agreement a financial institution and a bank from amongst themselves which shall be responsible to disburse financial assistance by way of loans or advances or guarantees or reliefs or concessions or sacrifices agreed to be provided under the scheme. This step is necessary to have smooth implementation of the scheme. The BIFR reserves the right to periodically monitor the implementation of the scheme sanctioned.

Review Questions

1. What is an operating agency?

2. Explain the procedures followed by BIFR in the rehabilitation of sick industrial units.

PROJECT FINANCE

Time : 3 hrs. Max : 80 marks

PART - A

(5 x 4 = 20)

Answer any **FIVE** questions
All questions carry EQUAL Marks.
Each answer need not exceed one page.

1. What is a Project?
2. What are the sources of Project identification?
3. What is Capital gearing?
4. State the features of a GDR.
5. What do you mean by DSCR?
6. State the limitations of Payback Period Method.
7. Define Industrial sickness.
8. What are the functions of the BIFR?.

PART - B

(4 X 15 = 60)

Answer any FOUR questions.
All questions carry EQUAL marks.
Each answer need not exceed FIVE pages.

9. Explain the stages in a Project Appraisal.
10. As a banker, how would you undertake managerial appraisal of projects?
11. What is IRR? Explain its relevance in Project Appraisal.
12. Elaborate the various parameters of SCBA.
13. Discuss the causes of industrial sickenss.
14. Explain the process of rehabilitation of a sick unit.

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